KHS

SUSTAINABILITY REPORT FOR 2021/2022

Acting responsibly – for people and the environment

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Strategy and governance

Ecologically and economically fit for the future

Future perspective – the circular economy

In many of its fields of activity KHS actively and consistently embraces the various issues of sustainability. Circularity in conjunction with the protection of the environment and our climate plays an important role here.

Dear Readers:

You undoubtedly know KHS to be a supplier of durable and reliable filling and packaging systems for the beverage industry. Our mission is to holistically cater for the requirements of our customers and develop systems and solutions for them that are in operation for many, many years. Climate change presents us all with enormous challenges. In order to limit global warming we must significantly cut greenhouse gas emissions within the space of just a few years. This means that we want to increase our share of renewable energies and further reduce our use of materials – or make them circular wherever possible. Here, the key question for us is how we can better bring our lines, machines and services – already designed for durability and efficiency – into line with these objectives in the future.

Our machines are chiefly made of steel, stainless steel and plastic. In synergy with our modular designs largely based on standardization, we have already managed to lengthen the life cycle of our equipment considerably. In doing so, we maintain the value of our systems for our customers for as long as possible, with machines and lines often up and running for 15 years or more. We consider the numerous further developments and upgrades of our machines and service products, the majority of which aim to save energy and process media, to be a major contribution to the retention of this value. In both cases, these are important factors when it comes to cutting down on greenhouse gas emissions. Furthermore, ergonomics and operator protection have a high priority which we consistently continue to observe.

Regarding packaging, for many years we have offered a broad portfolio of systems that save on materials. Lots of our [r]PET containers are extremely light, circular and gentle on the climate, for example, with select styles of secondary packaging consuming very little material indeed. We can provide our customers with validated information on questions about CO_2 equivalents for all KHS packaging systems and solutions. Here, we do not just want to merely comply with standards but rather to concentrate further on producing future-proof packaging systems that are fully circular. All of this commitment and our awareness and recognition of the urgent issues of our day and age underline our sense of corporate responsibility and our sustainable actions – for both people and the environment.

Our corporate responsibility centers on people with their individual ideas, requirements and goals, however. For KHS, our employees are our most precious commodity. Their encouragement and development are thus the focus of our activities. The above-average number of years of service to our company given by our employees confirms this approach and allows us to build on valuable expertise both today and tomorrow. We foster and promote our employees in all fields with targeted courses of further training and opportunities for development. This helps us to close the loop here, too, enabling us to further benefit from valuable knowledge down the generations and use it as a basis for new ideas and incentives, particularly with respect to the development of the circular economy.

Best regards,

Kai Acker
CEO
KHS Group

Global partner to the beverage industry

Reliable filling and packaging systems from a single source

The KHS Group is one of the world's leading manufacturers of filling and packaging systems for the beverage, liquid food and non-food industries. The German company was established in 1993 through a merger of Holstein & Kappert AG, founded in Dortmund in 1868, and Seitz-Werke GmbH, founded in Bad Kreuznach in 1887 (later SEN AG). With a history dating back over 150 years, the KHS Group is therefore one of the most experienced suppliers on the market. In 2022, the company with just over 5,000 employees achieved a turnover of €1.291 billion. The KHS Group is a wholly owned subsidiary of Salzgitter Klöckner-Werke GmbH, itself part of the Salzgitter Group.

The KHS Group operates ten production sites situated across the globe. At its five plants in Germany KHS develops and manufactures its full range of filling and packaging machines for processing containers made of [r]PET and alternative materials, glass bottles, cans and kegs. It has specialized in the production of durable and efficient technology and focuses on the further development of digital systems designed to improve individual process steps in operation and increase operator safety and overall equipment effectiveness. During the reporting period KHS further developed its packaging expertise regarding plastic containers and secondary packaging. These systems for environmentally-friendly yet safe packaging are presented in the chapter on product responsibility. Here, KHS also sees itself as a systems supplier to smaller filling plants or breweries and offers these customers a range of products based on innovative high-performance equipment.

The KHS Group is headquartered in Dortmund, Germany, where its main factory produces bottle washing machines, pasteurizers, labelers and conveying technology. Parts are also manufactured in Dortmund. The Bad Kreuznach plant pools KHS' expertise in process, filling and kegging technology. High-performance packaging machines are manufactured in Kleve, where the competence center also provides advice on all secondary packaging systems and solutions.

Worms is home to our specialists for high-performance palletizers and packing and unpacking systems. Our site in Hamburg is distinguished by its many years of extensive expertise regarding all aspects of plastic containers for the beverage, liquid food and non-food industries. It also supplies machines for the manufacture and coating of plastic containers as turnkey system solutions. Our expert team for digital product solutions that supplement our machinery portfolio is networked across all sites. This structure supports the KHS Group in its implementation of holistic approaches for use in our plant technology with the help of the individual specialist disciplines.

Our five international sites are located in the USA, Mexico, Brazil, India and China. In China, our former location in Suzhou was closed in 2021 and a new facility opened in Kunshan. With its increased capacities and improved

production processes, the new Chinese factory can specifically and efficiently service the higher demands of the local market.

The KHS Group's production sites outside Germany primarily produce for the local markets and are responsible for independently implementing line projects in their respective regions. In this respect they forge a link to our German plants and enable customers to be given direct support in their local area.

Our clients also have access to a worldwide network of KHS sales and service offices in 35 countries. This network is complemented by our range of digital services that include our worldwide 24/7 Service HelpDesk, effective remote diagnostics tools and our digital KHS Connect customer portal.

1.291

billion turnover

5,002

employees

ALL KEY FIGURES

Creating value

Fields of action at KHS for sustainable and profitable added value

For the KHS Group, corporate responsibility means integrating social and ecological issues into the company processes and strategy. Our aim is to harmonize the impact of our business activities with the challenges faced by society.

We develop machinery and system solutions for our customers in the beverage, food and non-food industries that can be used to process products safely, reliably and with energy and resource efficiency for businesses and consumers alike. Our packaging systems are subject to constant further optimization and meet KHS' high demands with respect to product design, economy and environmental friendliness. KHS' promise of performance is expressed in our motto of "your reliable partner". We support our customers throughout the entire life cycle of their lines and machines with periodic new solutions and upgrades that generate added value.

KHS' vision of corporate responsibility is openly practiced in its full social diversity by over 5,000 employees from almost 80 nations worldwide. Their commitment forms the basis for trusting and long-term cooperation with all of the KHS Group's business partners.

Sustainability as a key pillar of our corporate strategy

Business practices and consumer behavior need to constantly change to halt the advance of global warming and prevent the loss of our ecological foundations of life. The sustainability targets negotiated in international climate and environment agreements are determinative here. We are faced with the challenge of applying our powers of innovation to bring our existing business models into line with the vision of a regenerative, resource-conserving circular economy in order to systematically, continuously and comprehensively reduce our impact on the climate and environment throughout the entire value chain.

In accordance with the new Salzgitter AG 2030 strategy issued by the Group parent company, the KHS Executive Management Board has defined the strategic positioning of the KHS Group for the next few years in its KHS2025 strategy program.

One core element of our strategy is continuous further development in a move towards sustainable business practice. In all key areas of the company KHS has thus specified measures designed to reliably and purposefully help cut greenhouse gas emissions by 2030 and 2045 respectively with the aim of becoming climate neutral. These measures are based on detailed calculations and analyses of the KHS Group's carbon footprint. Parallel to this, we are optimizing our processes, products and services for a resource-conserving, CO_2-reduced closed production chain. In doing so, we can offer our customers upgrades and new solutions that generate added value throughout the entire life cycle of their lines and machines.

As part of this strategy, Group parent Salzgitter AG has committed to net zero by 2045 and to binding, science-based greenhouse gas reduction targets. This commitment was cemented by its joining the Science-Based Targets Initiative (SBTi) at the beginning of 2022. Under the umbrella of the Group strategy, as a subsidiary and member of the Technology Business Unit KHS will also contribute to the planned reduction path in the striving for net zero. KHS has geared itself for this task and the implementation of suitable measures. The goal agreements reached by the Executive Management Board and executive managers are already based on sustainable defined targets for the environment, occupational health and safety and further personnel training.

As part of the Group-wide climate footprint, in 2022 KHS pinpointed the main sources of its own company greenhouse gas emissions throughout the value chain on the basis of the Greenhouse Gas Protocol. In the Scope 1 and Scope 2 categories KHS was able to evaluate its emissions (see key figures). Scope 3 throws up a number of specific challenges, in particular the collection of relevant data for exact calculation

of emissions for purchased goods and services and the use of our machines during their life cycle. The data situation here is still imprecise, the specifications of the global Greenhouse Gas Protocol (GHG) standard still vague in some places, and therefore requires in-depth dialog with our suppliers and customers. Our strategy will focus on cutting these emissions in the coming years.

Our company's direct and indirect, energy-related greenhouse gas emissions across all production sites are an integral part of this report. Our climate footprint forms the basis for the planned stipulation of our operative reduction targets and resulting business and investment plan that complies with the 1.5°C target.

Our strategic alignment is largely oriented towards the targets specified by the European Green Deal, the EU's sustainability and growth strategy and the EU Taxonomy Regulation. KHS deduces the relevant key figures for consolidated, non-financial reporting by the Salzgitter Group with reference to the EU's taxonomy targets. The data identified enables KHS to reflect on existing strategic fields of action and to derive new or recalibrated measures on the basis thereof.

Employee involvement

By further intensifying the dialog with our employees, the entire KHS workforce is more involved in our sustainable development process. An increased exchange of information and more intensive cooperation between the different companies in the Salzgitter Group are also designed to further expand the process of sustainable development. This serves to activate our full knowledge and ideas potential in order to push decarbonization and help save resources. For example, KHS took part in the internal Group-wide Salzgitter AG competition initiated in 2022 to generate measures for efficient decarbonization by submitting various suggestions. The most promising approaches expressed in these ideas have been identified and are now to be widely applied – where possible, throughout the entire Group.

Strategic positions and fields of action

The KHS Group focuses its corporate responsibility on the entire value chain. With respect to its decarbonization target, the upstream stages in the mining of raw materials and their industrial processing and the use of systems and machines by customers throughout their entire service life have been identified as the key issues here.

KHS offsets these challenges by exercising its creative powers in the development of its products and services. By engineering innovative products and intelligent system solutions with respect to packaging design, for instance, KHS is constantly working to reduce the carbon footprint of its new and existing machines.

Our key approaches are illustrated by the various example products outlined in this sustainability report that help to boost overall equipment efficiency and create circular beverage packaging:

- With our compact line designs we cut down on the use of materials while aiming for an increase in output.
- Modularization helps us to modernize and expand the systems installed at our customers' sites. At the same time, our range of services ensures reliable operation. Besides boosting functionality and efficiency, we extend the service life of our equipment and protect resources. If required, retrofits adapt the technology on existing production lines to cater for current market and customer demands.
- For operation at customer plants we optimize processes on our single machines and lines in order to limit the use of auxiliary media and consumables to a necessary minimum.
- Our goals for beverage packaging are reuse and full recyclability. Our packaging design development team thus directs its focus to the use of regenerative and recycled materials and on cutting down on packaging materials.

Our development targets for our packaging systems are to save on material and use fewer primary resources, replacing these with more recyclate, for example. [r]PET and biodegradable alternatives are KHS solutions with which we can meet future requirements with regard to the handling and processing of PET. We also offer a broad spectrum of innovative and sustainable concepts when it comes to secondary packaging. These range from secondary packaging made of paper to packs held together by nothing more than a few small dots of adhesive. We set up partnerships with scientific institutions and our

suppliers to identify new packaging materials and test their potential according to our criteria. In doing so, we strengthen our consultancy expertise in primary and secondary packaging and considerably help our customers to produce using our machinery and products in the long term while saving on resources.

Continuous further development for more sustainability

KHS is responsible for aligning its activities with demands for sustainable development with a view to its customers and the future. This gives rise to a number of central strategic fields of action that demonstrate how we aim to meet this demand.

1. **Customer satisfaction through reliable partnership**
   Our global demand for quality forms the basis of our corporate activities: KHS stands for the highest standards that are always geared towards customer requirements. The high quality of our filling and packaging systems is the prerequisite for a long service life, smooth and efficient production processes, product protection and safety in the operation of our plant technology. KHS engages in systematic quality management, defining and monitoring suitable requirements to this end for its suppliers.

2. **Development of flexible and sustainable machines and system solutions for long-term value creation**
   We aim to always find a system solution for our customers that gives them perfect results as regards output, cost and resource efficiency. Our portfolio is intended to help them leave as small an ecological footprint as possible. KHS supports its customers from the initial plans to on-site installation with tailor-made concepts, long-term empirical values and customized solutions. This also holds true when customer requirements change over time – for example as a result of market developments, new regulations, innovations, changing patterns of consumption and demands for sustainability. One of our most important concerns is to design our systems so that they can be flexibly adapted and expanded as and when required. Providing options for modernization and system modularization are important principles in product development at KHS.

3. **Global footprint: customer proximity and great service expertise through worldwide presence**
   Throughout the world KHS has ten production sites in six countries and over 40 service centers located in 35 different nations. Our global presence means that we are close to our customers and can offer them quick and reliable support on site with our range of expert services. Designated contacts expertly ensure that our customers' systems operate efficiently. KHS' responsibility does not end with the delivery of our machines: this is where it really begins. We provide many options for our customers: from direct support from our 24/7 Service HelpDesk through our worldwide spare parts service or IT-assisted remote diagnosis in the event of system disruptions to personal assistance from one of our many service centers located around the world.

4. **Responsibility for the people and environment at our factories**
   For KHS, the sparing use of energy and resources in the manufacture of our system solutions is a prime concern. Water, electricity, natural gas and fuel are needed for production and intralogistics, our offices and vehicle fleet and for structural extensions of and modernizations to our production sites. We have installed systems of environmental and energy management at our production sites to continuously reduce the necessary consumption of the above. We are constantly improving our production processes with an eye to energy and resource efficiency and to exploiting and encouraging the exchange of ideas among our employees. The conservation of resources and energy efficiency are also key topics at our production sites outside Germany where we produce for the local markets. This decentral arrangement allows us to react locally to customer demand and at the same time assume our cultural and ethical responsibilities as a global company.

5. **KHS as a future-oriented and attractive employer**
   KHS is only as innovative, successful and fit for the future as our own employees are. Encouraging them and their development is thus our core concern. We attach the greatest importance to providing fair, attractive working conditions and an open environment defined by mutual respect and appreciation. Besides assuring skilled labor and personnel development, plus continuously expanding our occupational health and safety management system, the most important fields of action for our HR Management Department are therefore digitalization and process efficiency and transformation of the modern working environment.

The strategic fields of action within KHS form the basis of our cooperation – and of our success. Through our strategy we have permanently anchored the underlying values thereof in our everyday work. Our system of compliance and code of conduct provide the fundamental foundations here. Moreover, we find it extremely important that our partners and suppliers also comply with the standards we have defined.

One key module in effect since 2022 under the European Green Deal is the EU Taxonomy Regulation. This aims to accelerate the reduction in ecologically harmful greenhouse gases by diverting flows of capital towards ecologically sustainable alternatives. A suitable framework is developed for companies on application of the EU's taxonomy directives, in which ecologically beneficial and sustainable business activities can be generally classified based on six central environmental targets.

Anchoring and controlling corporate responsibility

The KHS Executive Management Board holds general primary responsibility for sustainable and ethical business practice; it establishes principles that apply to the entire Group and reaches decisions on policies and investments. The decisions made by the Board are prepared by the responsible executive managers who also monitor the implementation thereof. In order to be able to consistently implement our mission statement and the claims derived from this, KHS has assigned clear roles and responsibilities within the company. We use a comprehensive system of governance that encompasses various controlling entities both at company and Group level and includes external audits and certification. Systems of management have been set up at all of our divisions and production sites that define processes and operative responsibilities. These include certified management systems governing compliance, our suppliers, quality, innovation, energy and environmental protection, human resources and occupational health and safety. Furthermore, the KHS Group has taken part in the EcoVadis rating system every year since 2015; at the time of writing, it has a successful silver rating valid until July 2023. KHS has also participated in SEDEX audits since 2013.

In order to underline the strategic relevance of the sustainable further development of the KHS Group, during the reporting period our system of sustainability management was integrated into our Strategic Projects Department. Here, together with the Executive Management Board, executive managers and responsible user departments, the company's strategic positions and measures are developed, approaches and achievements made recorded and described and responsibility assumed for the systematic expansion of KHS' CSR reporting system. This is executed in close alignment with the ESG functions of our parent company Salzgitter AG.

Communication with our stakeholders takes on a central role when recording and communicating KHS' corporate responsibility and its contribution to sustainable development. We identify the demands made of the KHS Group by various parties through a number of different channels. Here, the perspectives held by our employees and their representative bodies, our executive managers, Salzgitter AG, our customers, competitors, the media as stakeholders for the general public and various other interest groups in particular are taken into account. KHS actively uses the demands made by these stakeholder groups to regularly check and adjust its strategy in order that it can continue to be a reliable partner to its customers.

EcoVadis
This independent rating tool assesses Corporate Social Responsibility (CSR) in the fields of environment, labor law and human rights, ethics and sustainable procurement.

SEDEX
SEDEX (Supplier Ethical Data Exchange) is an online platform that provides internationally recognized SMETAs (Sedex Members' Ethical Trade Audit). These assess issues such as working conditions, occupational health and safety, hygiene and environmental management.

Compliance: sustainable voluntary commitment

Codes of conduct, reporting systems and data protection

One of the most important guiding principles of our company is that we live by our values and set an example in doing so.

We are responsible for adhering to ethical and moral standards within our company and understand this to be much more than just a legal obligation. We are convinced that success can only be generated on the basis of cordial, respectful and considerate cooperation with one another.

The Executive Management Board must act as a guiding light here by showing exemplary conduct, demanding this of and encouraging it in others. Its own mission is thus to sustainably commit to KHS' compliance program and Compliance Department. When it comes to compliance, the Board sets a good example together with the company's executive managers. Here, every executive manager is required to act as a role model.

We have installed a system of compliance management that is applicable worldwide. At our central headquarters in Dortmund our compliance desk is responsible for supervising adherence to the appropriate values and codes for the entire KHS Group. Annual surveys and risk analyses are carried out in areas that are particularly relevant to compliance: anti-corruption, antitrust law, the prevention of money laundering and criminal acts in general and data protection. In addition, each KHS Group company outside Germany has an appointed coordinator who is assigned to deal with such issues when and if required in cooperation with the compliance desk in Dortmund. The KHS code of conduct constitutes the central commitment in this respect.

The KHS code of conduct

KHS' code of conduct was introduced in 2012 and is compatible with the code of conduct adopted by our parent company Salzgitter AG. Both are based on the United Nations Global Compact. The code centers on a shared system of values and principles designed to act as a guide to the manner in which all of our personnel must conduct themselves. It includes in particular regulations on fair competition, the avoidance of corruption and conflicts of interests, transparent reporting and the duty to observe secrecy. All employees are instructed on the use of the guidelines by their executive managers or our Compliance Department and are encouraged to make queries at any time.

Intergroup whistleblower system

A central independent entity for internal reporting has been created through Salzgitter AG to record as comprehensively as possible any violations of our code of conduct, legal requirements or company guidelines. Notifications can be submitted to the external ombudsperson's office that are then forwarded to our compliance desk for checking and processing.

In order to prohibit all forms of corruption and unfair competition, we have implemented a strict four-eyes principle: payments or contractual obligations can only be made by at least two authorized employees of our company. We have those responsible in the relevant departments sign an annual compliance declaration and a voluntary agreement in relation to conflicts of interest. Various transactions at our subsidiaries outside Germany must be approved by KHS GmbH as the parent company in order to avoid corruption.

Moreover, our compliance guidelines are drawn up and adherence to legal provisions in the contract review process is assured by specialist contract lawyers. In our technical fields of activity we ensure that legal requirements are complied with through regular and constant observation of legal regulations and provisions. Any changes to standards or specifications are then communicated throughout the entire company group. A wide range of basic and compulsory further training courses in the particularly vulnerable

sections of our company make sure that our workforce is always notified of the latest information and kept up to date.

Another important concern for KHS is the protection of personal data. In order to monitor and ensure the protection of such, we have assigned a central data protection officer and set up an international data protection organization in the sense of the GDPR. We also obligate our subsidiaries outside the EU to exercise a high level of data protection. We have introduced a worldwide reporting system to handle any violations of data privacy.

Information on further company principles relevant to compliance, such as our supplier code of conduct or the Modern Slavery Act, etc., can be found here.

Three questions for Marcel Moranz
Chief compliance officer
KHS GmbH

How is compliance addressed as an objective in the development and training of executive managers?

Our executive managers are obliged to practice compliance in a corresponding declaration signed every year. Compliance is also the subject of a dedicated module in our in-house KHS Fit4Leadership training program. Furthermore, our online training courses also constantly focus on executive managers by requiring them to complete regular obligatory course units. Participation is actively requested and tracked by their respective superiors. By way of supplement, topical training sessions are also held which are compulsory should there be an exceptional change in risk exposure during the course of the year. Our training program is rounded off by classroom courses offered throughout the year that can be booked individually.

How does KHS encourage a basic culture of compliance in this context?

The key element here is our tone-from-the-top approach, where the Executive Management Board and executive managers demonstrate compliance in their function as role models. This is supported by the specification of transparent, comprehensible rules on the core issues covered by our compliance management system. The main topics our risk-based approach focuses on are antitrust law, the fight against corruption and the prevention of money laundering, conflicts of interest and criminal acts in general. As it is actively incorporated into our code of conduct, compliance is also a major element in our relations with our business partners.

What protection does KHS offer its employees and other stakeholders who provide information on violations?

People can send information to the compliance officer directly and confidentially through the compliance@khs.com email address. They can also contact the ombudswoman at Salzgitter AG in confidence. If this is the case, it is ensured that the identity or clues as to the identity of the person submitting information remain hidden.

Value-based supplier management

Code of conduct for the supply chain

We are convinced that integrating sustainability into the strategic and operative processes and procedures of our company yields high quality and product reliability – as are our customers, who are increasingly requesting proof of this. We can only satisfy our own demand for quality and our clients' requirements if our business partners and suppliers share our convictions.

One important prerequisite for a trusting partnership with the above is thus a common understanding of principle standards that form the basis for sustainable business practices.

To this end, we have developed a code of conduct for suppliers that is binding for all of the national and international suppliers we work with. It has been drawn up based on the measures and regulations of the Salzgitter Group and applies to all areas of the company that maintain business contacts with suppliers and service providers.

The basic principles and requirements defined in our supplier code of conduct cover the following fields:

Legality and integrity
This includes compliance with applicable laws, combating corruption and money laundering, antitrust law, export controls and maintaining secrecy and data privacy.

Human rights and working conditions
This encompasses freedom of association, working hours, wages and the rejection of child and forced labor and of discrimination.

Occupational health and safety
Providing our employees with a safe and healthy place of work has the utmost priority for us. This is why we go way beyond statutory requirements in the measures we have introduced to prevent accidents at work.

Environmental protection
Our sustainability claim is substantiated in our environmental regulations and rules on the sustainable use of energy and resources and climate protection.

The upstream processes and stages in value creation at our company are many and diverse: they range from the processing of raw materials such as steel plate and profiles through the use of complex assemblies, electromechanical equipment, drive technology and installation services to entire machines. Accordingly, we have an extensive pool of direct suppliers with their own subcontractors. This is a huge responsibility for us – and also means that we have a considerable sphere of influence that we wish to make positive use of.

Sustainability criteria for supplier assessment

Compliance with our supplier code of conduct is mandatory not just for our business partners but also for their own subsuppliers and subcontractors. We also audit our contractors with the help of questionnaires and documents of proof that include certain management systems governing quality, occupational health and safety, environmental protection and energy, for instance. Our system audits determine whether our suppliers are fundamentally suitable or not. We also carry out process and product audits designed to ensure product quality.

The information submitted for a system audit is verified by supporting documents and during tours of the supplier's site.

As part of our due diligence obligations with respect to social and ecological requirements throughout the supply chain, we continue to develop our risk analyses and test procedures. Our benchmark here are the UN's guiding principles for business and human rights and their translation into the German Federal Government's national action plan.

With countries such as France, Great Britain and the Netherlands having passed suitable supply chain legislation in the past few years, on January 1, 2023, the Act on Corporate Due Diligence Obligations in Supply Chains (LkSG) came into force in Germany that aims to improve the protection of the environment and of human and children's rights throughout global supply chains.

We treat the associated new legal requirements as a regular incentive to subject the approach adopted by our value-based supplier management system to scrutiny and further develop it accordingly. During the reporting period the KHS Group was involved in Group-wide measures aimed at integrating LkSG into our existing compliance management system to meet our corporate due diligence obligations.

Award Winner
In 2022 KHS was again awarded a **silver medal** by the **EcoVadis CSR rating program**. KHS has received this award for all of its production sites worldwide since 2015. This independent rating tool assesses Corporate Social Responsibility (CSR) in the fields of environment, labor law and human rights, ethics and sustainable procurement.

Germany's Act on Corporate Due Diligence Obligations in Supply Chains (LkSG) in brief

In July 2021 Germany's **Act on Corporate Due Diligence Obligations in Supply Chains** (LkSG) was announced in its Federal Law Gazette.
LkSG came into force on January 1, 2023, and obliges all German companies irrespective of their branch of industry that employ over 3,000 people in Germany to prevent or at least minimize violations of human and environmental rights in their supply chains.

LkSG requires that extensive due diligence is exercised in a company's own area of operations and in those of its direct suppliers (i.e. direct contractual partners). Should the situation demand, such as if there is substantiated knowledge of a violation, this due diligence must also be extended to cover indirect suppliers.

Applicable due diligence obligations

- Establishment of a risk management system
- Performance of risk analysis
- Laying down of preventive measures and taking of remedial action
- Issue of a policy statement
- Establishment of a complaints procedure
- Documentation and reporting.

The due diligence obligations listed in LkSG are based on recognized global standards (such as guiding UN principles and OECD directives).

Product responsibility

Focus on customer requirements

Focus on customer requirements

Our responsibility for sustainable machine and packaging systems

KHS is a reliable partner to the beverage industry, supplying it with future-proof filling and packaging systems. Besides being safe to operate with effective process monitoring, our plant engineering must function reliably for many years while saving on energy and resources. In order to continue to exploit potential for optimization of operations, KHS is constantly developing its product portfolio. Our new and further developments are therefore primarily geared towards modularization, individualization and digitalization of lines and machines. We also offer a multitude of improvements in this context as conversions or expansion options for existing production setups. This permits our customers to quickly, easily and reliably adapt and scale their production lines to new packaging formats while using fewer and fewer materials.

KHS always focuses on producing a beverage that is perfectly packaged with regard to product protection, marketing and the environment. In view of the continuing consumer demand for environmentally-friendly yet safe and practical packaging, we optimize our equipment to ensure an efficient, ergonomic and reliable production process and offer the beverage industry innovative packaging systems. In the face of the ecological, social and health challenges presented by our increasing exploitation of resources, resulting in more and more toxic emissions being released into the atmosphere, we check and appraise alternative materials such as recyclate or paper and cardboard for packaging. In doing so – and in tune with Salzgitter Group strategy – we wish to help reduce the consumption of virgin materials and fossil sources and improve the recyclability of packaging. Many of our developments thus concentrate on [r]PET container systems and secondary packaging.

The demands made of our filling and packaging machinery are many and varied. With our systematic program of quality and innovation management we help to make sure that our lines and machines can be reliably operated throughout their entire service life in a manner that is gentle on resources. Talks with customer and dedicated workshops allow us to systematically record specific requirements regarding future product developments. This holds particular relevance for concrete sustainability targets and the challenges these pose, such as handling resources so that they demonstrably cut greenhouse gas emissions in system operation. Where packaging is concerned, in the future it will be important to use as little material as possible and to feed this back into a recycling system.

With our product developments we want to help shape our customers' value creation processes in the long term by providing them with efficient, resource-saving systems and solutions.

Constant and consistent reliability

Quality and innovation management with the focus on sustainability

KHS develops and manufactures filling and packaging systems with a consistently high demand for quality. Here, reliability and durability are key pillars in our system of quality management. With an eye to the future, our developments help to meet customer demands for reduced container weights and the use of environmentally-friendly materials. Strict quality controls ensure that our machines leave the factory in perfect condition and can be immediately commissioned whatever their global destination.

Assuring, promoting and constantly optimizing quality

Our Quality Management Department centrally controls all aspects of process and product quality for all of the machines and components manufactured at our production sites. The internal and external audits regularly carried out at all of our plants are a key factor here. The above department is also responsible for annual certification in accordance with ISO 9001 that is held by all of our factories. It is expected that our most recent production facility in Kunshan, China, will receive ISO 9001 certification in the course of 2023.

These system-relevant specifications form the basis for the design of our products. Our promise of performance and our own aspiration in relation to the sustainable quality of our products is supported here by numerous operative measures and thus ensured in the long term. We supervise our suppliers and check the high quality demands made of them at regular intervals. We can specifically identify the demands and expectations of our customers through regular workshops, personal talks and a methodical complaints management system. In turn, these targets define our continuous improvement process that is designed to increase the level of quality of our products.

As a permanent partner to Quality Management, our Process Management Department is also instrumental in promoting the further development of our company on both a national and international level with the help of process models and organizations. The process risk analyses performed in this context are used to document and define risk minimization measures.

Firm focus on customers

The wishes and demands our customers have of our machines and other products and fast-changing laws and directives in the call for greater sustainability specify our targets for quality assurance.

KHS carries out regular surveys and holds joint workshops with its customers to this end. The topics covered include sustainability criteria and demands, technology, market conditions and market trends. Our participation in trade shows and industry meetings and an active exchange of information with our Key Account Management help us to identify the quality demands that will be made of filling and packaging systems in the future. KHS offers customers over 130 different standard conversion scenarios designed to keep their existing machinery up to date with various modernization measures so that they can produce cost-effectively with an efficient use of resources for many, many years.

Developments based on decades of experience

In its long company history KHS has introduced a great number of reliable and sustainable new and further developments for the beverage industry. Our mission to this very day is to continue to do so: our aim is to supply intelligent product systems with maximum product quality that our customers can depend on in the long term. This is only possible thanks to our R&D management system that has its own steering committees and is firmly anchored at key levels of the company, such as in the Executive Management Board, Product Development, Sales, Purchasing and Controlling. These bodies regularly coordinate on current development projects, targets and procedures to ensure that the system is successfully implemented.

The significance of digitalization with all of its many different aspects continues to grow here. With it we can provide intelligent system solutions and further optimize the overall efficiency of our plant engineering. These include devices for greater operator safety, expansions and longer life cycles. This means that our projects are always closely monitored from approval to completion and assessed from a number of different perspectives with regard to time, cost and quality. An annual R&D roadmap is also drawn up by Technology and Sales to help coordinate and plan future activities. Our employees are regularly trained to ensure that these processes are permanently implemented and are informed of the procedures to be complied with.

For each project idea we prepare a holistic business case well in advance which is used to subject our idea to intense scrutiny from an economic angle before it is actually realized. Following its launch, the project is presented on a regular basis and examined for any criteria that would result in its termination.

We not only make sure that resources and capacities are specifically assigned but also that the project is both marketable and future-proof; we do so by studying ideas and development projects extremely carefully from the very beginning and throughout the entire development process.

We also fall back on expertise from external research facilities and institutes and on invitations to tender issued by ministries at federal and regional level that we refer to on an individual project basis if R&D topics can be pursued better and more efficiently with the help of such partners.

Example central R&D projects in the reporting period

Process monitoring

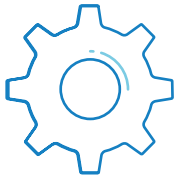
- InnoPET iFlex: increased line efficiency through much shorter changeover times.

Energy and resource efficiency

- Innopack Kisters TPP try paper packer: secondary packaging made of paper instead of film.
- Packaging system for packs without secondary packaging: Nature MultiPack, where bottles and cans are held together by dots of adhesive.

Efficiency and performance

- SmartCan filler/seamer block by KHS/Ferrum: hygienic block system for the high-performance range.
- Innopal PLR high-performance palletizer: high performance at a low infeed thanks to the use of robotics.



Aspects of sustainability in the development of filling and packaging systems

Sustainable aspects of ergonomics, product safety, energy efficiency and durability taken into account

KHS supplies its customers with reliable, efficient and durable filling and packaging systems. These are chiefly used to package beverages and liquid food products in a manner that is safe, attractive and gentle on the environment.

KHS consistently strives to optimize its products in the long term. To this end, we are also increasingly exploiting the opportunities provided by digitalization to further improve the ergonomics, product safety, energy efficiency and durability of our filling and packaging systems.

Ergonomics

Ergonomics/operator safety

In the ergonomic design of its plant engineering KHS pays particular attention to ease of operation, i.e. improving the workplace, the way work is organized and the human/machine interface.

The increasing automation of operating procedures and processing sequences, such as during format and product changeovers, and intelligent operator prompting on standardized HMI or Human Machine Interface systems are instrumental in developing machines that are ergonomic and safe to operate.

In this way, numerous process steps are further simplified, shortened or streamlined, with possible operator errors and thus disruptions to operation minimized. This meets the demands of our customers for efficient system operation at all times despite the growing number of different products and packaging styles processed on a single production line.

Besides IT-assisted solutions, various constructional measures are also being constantly further developed and implemented to improve ergonomics or operator safety. This helps KHS to globally support the zero accident strategy adopted by many of its customers.

Example developments in the reporting period

InnoPET iflex automated line changeovers
Lots of beverage producers find themselves processing an ever greater range of items on their production lines. This naturally affects the overall equipment efficiency or OEE, as each associated product or format changeover causes the line to stop.

This is where KHS comes in with its new InnoPET iflex automated line changeovers, initially developed for PET filling and packaging lines with a large number of stock keeping units or SKUs. With its fast, reliable and reproducible changeovers this system significantly boosts the OEE, in turn also improving ergonomics and operational safety.

The InnoPET iflex setup is based on the careful coordination of various machine options whose degree of automation has been specially optimized to shorten changeover times. Parallel to this, supporting software solutions ensure that changeover routines are documented and can be exactly reproduced by the operator at all times. The individual machine conversions are coordinated and synchronized by the **superordinate Innoline Flex Control line management**

system that helps the operator to determine the time of the order changeover on the respective machine.

InnoPET iflex enables fully automated format changeovers on the high-performance KHS InnoPET Blomax Series V stretch blow molder used to manufacture [r]PET containers. The heavy molds are handled by robots and the amount of operator intervention necessary during format changeovers has been considerably reduced. This substantially reduces the machine operator's workload and helps to increase his or her safety. All work on the new system can also be performed without the need for any tools, with the ergonomic design providing outstanding accessibility.

Furthermore, the **InnoPET iflex** is also available for block systems used to manufacture, label and fill [r]PET containers. Here, the operator can also convert the station for the new label on the labeling unit during a format changeover quickly, safely and efficiently with the help of several automated work steps.

The container conveyor technology has been modified to include automatic railing settings for non-returnable PET lines to ensure the safe conveyance of containers through the entire filling and packaging process. Railings can thus be reliably adjusted and their settings reproduced. The streamlined system supports ergonomic and simple handling. Format changeovers are triggered by the press of a button on the HMI. When a product type changeover is activated on the HMI, the railings automatically move to exactly the right position. In just a few steps safe format changeovers can now be carried out in very little time indeed.

Flexible and efficient filling

KHS already provides its customers with flexible expansion options for a multitude of filling systems. These enable a filler to be individually extended so that it can process additional beverage types or container sizes, for example. This platform system is now not only available for glass and can fillers but also for PET bottle fillers. In the future automatic format and product changeovers will also be possible here at the press of a button – without the need for any operator intervention, thus improving operational safety and the OEE.

High line flexibility and efficiency

Whereas in the past only one product was usually run on aseptic PET lines, bottlers of sensitive beverages now face an ever-growing demand for flexibility. Beverage producers who process both sensitive beverages and juice and carbonated soft drinks and fill these into [r]PET bottles often prefer to use 38-millimeter bottle necks for the former and containers with 28-millimeter openings for the latter. If the bottle neck is to be changed on a PET line, to date a relatively large amount of effort was required to convert the stretch blow molder in particular, meaning that the machines often clocked up well over four hours of downtime – tying up the often very few operators of the same for a long period of time.

The new quick neck change option now enables the machine to be very easily converted over to the next [r]PET container neck. As a result, two operators need up to 70% less time for the changeover (on an InnoPET Blomax with 16 stations in this example). The new KHS option gives beverage producers much greater flexibility, as they can now also run much shorter production cycles for bottles with different necks and therefore reduce their warehousing effort accordingly.

The significance of HMI systems

HMI systems continue to gain in importance as they help machine operators to handle increasingly diverse customer product portfolios safely and efficiently. This is why we are investing in the further development of HMI systems in order that customers are increasingly enable to process their individual requirements using such equipment. On the one hand, these optional further developments improve ergonomics and operational safety. On the other, they also allow production processes to be reproduced, in turn optimizing the OEE.

Construction measures for operator protection

Besides the many automated processes designed to improve operational safety, further developments in the design engineering itself continue

to play an important role. Regarding manholes that provide access to the machine but possibly also open up onto hot and/or corrosive media, customers often specify their own individual requirements governing the safety of their employees that go beyond mere CE conformity. One example here is the **Fortress key system** that is available as an option specifically for bottle washing machines and tunnel pasteurizers. Manholes can then only be opened once an electronic sensor has made sure that they do not conceal any dangerous media.

Safe access during machine operation

On the Innokeg Transversal keg washing and filling system an intelligent line layout improves both the ergonomics and access for the machine operator. A single conveyor belt running through the middle of the opposing processing stations services the entire keg washing and filling process quickly and efficiently for all standard market container sizes and formats. Operators can freely access the system from all sides, thus making the maintenance and servicing work they are required to carry out much easier to manage. This also increases the level of operational safety.

Good ergonomics plus excellent hygiene

Despite its extremely compact design, the new SmartCan can filler by KHS/Ferrum gives operators a relatively large amount of space to work in. No tight-fitting cladding is used that is difficult to access. Each section of the filler can be easily reached for maintenance, overhauls or format changeovers. The amount of manual intervention required is therefore reduced to a minimum. These improvements to the ergonomics of the design in particular also make for an excellent standard of hygiene.

Safety

Product safety

The safe and hygienic processing of a beverage is the central task of a filling and packaging system. The packaging protects the product during transportation to the retail outlet and ensures that it can be safely drunk by the consumer.

For KHS, product safety means supplying safe, high-quality machines based on technologically sophisticated systems and solutions and at the same time ensuring that the equipment is gentle on resources during operation.

To this end, the production line requires perfectly coordinated monitoring processes so that any disruptions or faults can be quickly and efficiently identified and batches tracked right from the beginning.

The tracking processes necessary for efficient line operation are increasingly being managed by digital monitoring systems. The digital systems used help to minimize product loss and further reduce media consumption in an attempt to achieve the best-possible overall equipment effectiveness while conserving resources during operation.

Example further developments in the reporting period

360° monitoring by productive systems
In the day and age of what is known as the smart factory, lines and machines must be able to communicate perfectly with the IT systems of the operating company. The productive Innoline MES (Manufacturing Execution System) is one of these pioneering control and regulation applications for large, complex high-performance lines in particular, where diverse production scenarios need to be managed without disruption. This applies to both the filling and packaging process itself and to all peripheral processes that are directly related to production. Beverage producers often already have their own IT systems in place at their plant. This means that the MES thus needs to coordinate with these intelligently and be integrated into all existing interfaces at the customer site. KHS has concentrated its further development of the MES on precisely this aspect and implemented new standard interfaces for line monitoring and line management. These ease and optimize communication between the various machines on the customer's filling lines – in the future, this will be regardless of which IT infrastructure is already in use at the respective facility. This in turn reduces the amount of time and effort required for commissioning and produces a high quality of data.

Diagnostics
Our process technology underwent considerable further development during the reporting period. As of now the process technology of all machines adjacent to the filler has been equipped with IO-Link sensor/actuator technology. This is connected up through external electrical peripherals for reading in data and control. This feature also enables the functions on the ClearLine HMI to be expanded in relation to the display and analysis of the peripheral equipment. To this end, a new operator dialog (faceplate) has been devised for IO-Link and select PROFINET devices.

The connected device's relevant process values and states (shown in status messages) are visible at a glance. Depending on the operating rights, operating parameters assigned for commissioning can be set here. It is also possible to simulate analog actual values such as pressure or temperature.

Product safety in beverage production
Inspection systems are used to continuously control the safety and quality of a filled and packaged product. This starts with the provision

of a perfect container for transfer to the filling process through the correct fill level and secure closure to the correct label position, batch or BBD declaration and correct positioning on the pallet for further transportation. These systems are usually incorporated into the respective machine and are increasingly being intelligently networked with HMI operating systems.

KHS Innocheck inspection systems for InnoPET blocks

The fully-integrated PET Preform Inspection (PPI) and PET Container Inspection (PCI) systems ensure reliable quality control through HMI systems. Customers thus benefit from a higher level of quality assurance for their products and require less space and effort as additional equipment is no longer required.

Innocheck rPET inspection systems for the InnoPET Blomax Series V/rPET control for preforms made of rPET

The use of recyclate as a secondary raw material for new beverage packaging is a key element in a functioning circular economy – one whose importance is constantly increasing. However, the rise in the amount of recyclate used is mirrored by fluctuations in container quality and thus higher rejection rates. The newly developed preform inspection module from KHS, that is based on the reliable, fully-integrated Innocheck inspection system, constantly records the gray value of [r]PET preforms inline. This saves resources and increases line availability.

Innopas SX tunnel pasteurizer – holistic hygiene concept

Microbiological safety is essential on filling and packaging lines, especially in the filling area. Tunnel pasteurizers are sometimes over 30 meters long, consequently making the manual cleaning of such machines a time-consuming task. Thanks to the hygienic design of the Innopas SX that has few assemblies in the pasteurizer tunnel interior and good access, this section can be easily and thoroughly cleaned. Alternatively, a newly developed interior cleaning system is also available that produces good cleaning results faster with minimal deployment of personnel. Here, a rotating high-pressure nozzle unit is passed through the machine on the conveyor belt, providing an effective way of maintaining the necessary overall level of hygiene in the machine

The option of linking in ERP systems has considerably improved product safety in the syrup room (a large storage container where syrup or concentrate is kept to make fruit nectar, soda pop or flavored beer such as beer mix beverages or shandy). This means that production can be logged and batches tracked without any breaks in continuity. Moreover, in this way orders can be directly transferred from the ERP to the line's automation system. This option is available for all automatic syrup rooms with a modern process control system.

Consumption

Energy and resource efficiency/improved performance

Intelligent line design is prerequisite if consumption is to be optimized in the production process in order to conserve resources during operation. KHS uses new 3D software and virtual solutions for this purpose that paint a real picture of the future filling line. Efficient energy and resources management in and around the line is a key planning aspect here. The growing trend towards compact lines and machines results in greater savings in resources – especially cleaning media, water and heat and thus energy. This resource-conserving aspect also shapes the further development of machines at KHS with a view to boosting their performance while retaining or reducing the machine footprint where possible. In numerous cases, performance is improved by shortening downtimes, for example by reducing cleaning times. Increasing automation of format changeovers thanks to intelligent HMI system operator prompting also serves to boost performance while cutting down on the consumption of resources.

Example further developments in the reporting period

Smaller machine footprint
The development of compact machines with a smaller machine footprint continues. Block systems especially, that manage a number of different sequence steps simultaneously, save space and are efficient to operate.

Small-format lines and machines are suitable for SME line concepts – breweries in particular. KHS grants access to industry standards by supplying robust, high-quality systems with capacities that are tailored to these specific customers. This plant engineering is not only distinguished by its compact design but by the fact that certain systems, especially in breweries, can be flexibly aligned and expanded to cater for a whole range of different container sizes and formats.

SmartCan filler/seamer block by KHS/Ferrum
In order to service the growing market for sensitive beverages that make special hygiene requirements of the filling process, KHS has developed the new high-performance can filler block SmartCan by KHS/Ferrum for optimum product safety and the gentlest possible use of resources. The substantially smaller product room in stainless steel makes the new Ferrum seamer design much more hygienic than other standard market products. This enables significant savings in cleaning media to be made and cleaning times to be shortened. In the seaming process the block now also uses up to 20% less CO_2. Moreover, shorter format changeover times increase the level of machine availability.

The use of PTFE as a sealing material in the Innofill DVD filling element reduces flavor carryover and thus makes production much more flexible. PTFE expansion joints together with a pneumatic bell actuator mean that water lubrication is no longer required and up to 360 m3 of water can be saved every year. This greatly improves hygiene in the vicinity of the open beverage cans.

The SmartCan by KHS/Ferrum has also been designed to process lightweight beverage cans with ever thinner walls and a low top load.

High-performance Innokeg Transversal keg washing and filling system (OEE)
This keg washing and filling system is compact and powerful and also modular and expandable. It washes and fills kegs precisely and safely in an area dimensioned to fit a standard overseas container. Fully automatic adjustment of all format parts to the keg diameter and height boosts the overall equipment efficiency. With its optimized cleaning cycle the system achieves an increased output of up to 700 kegs per hour.

InnoPET BloFill and TriBlock [r]PET blocks
Here, the output has been increased by a further 12% to a maximum of 2,800 containers per hour and cavity. This results in an hourly capacity of up to 90,000 0.5-liter containers for still water

on the InnoPET BloFill ([r]PET container manufacture and filling) and InnoPET TriBlock ([r]PET container manufacture, labeling and filling).[1]

The **InnoPET TriBlock Compact** for water and CSD applications has a reduced **machine footprint** and needs less maintenance at a higher performance of up to 60,000 containers per hour.

[1] The example calculation is for the processing of still water only

Innopal PLR high-performance palletizer
With its intelligent robot technology and optimized pallet infeed array that permits fast pallet changeovers, this palletizer can process up to 625 layers per hour at a low pack infeed and improves the overall equipment efficiency of modern filling plants. The low-level pack infeed enables customers to do away with elaborate platforms and elevators, reducing the amount of material needed for line construction. This palletizing system can be installed on glass, PET and canning lines. Format changeovers to different pallet sizes are fully automatic, thus enabling safe and efficient operation.

Consumables in the production process

An environmentally-friendly energy supply and conscious handling of resources in the production process are central aspects in the transition to a circular economy and in reducing our overall carbon footprint. KHS observes the multiple uses of water or media such as CO_2 very closely and promotes new solutions in this field. The design of a line or machine, especially for product preparation, filling or thermal container treatment, is an essential factor when it comes to saving more water and caustic. New avenues are also being explored in our production processes that endeavor to continue to considerably reduce the amount of water used or replace this completely with alternative solutions.

Innofill PET DRV (modular platform)[2]
Carbonated beverages have to filled under pressure in order that the carbon dioxide bonded in the beverage is not lost and there is no excessive foaming. Carbon dioxide is normally used as the pressurization gas here. The new PET filler platform permits sustainable beverage filling with maximum energy savings and minimum carbon emissions; on the DRV filling system, for instance, CO_2 consumption has been cut from 150 grams per hectoliter to practically zero. No more CO_2 is needed, not even as a pressurization gas; this is replaced by sterile air. One new member in the DRV filling system series is the Innofill PET DRV-HC that has up to 10% higher outputs for [r]PET containers holding 1.5 liters or more.

Innopack Kisters CNP
As an alternative form of beverage can packaging, the new secondary packaging machine from KHS forms packs of cans without the need for any plastic or adhesive whatsoever. The energy-intensive shrink film can packaging process is no longer required, thus considerably cutting both energy consumption and carbon emissions.[3]

Innopack Kisters WSPP
The Innopack Kisters WSPP is a combined machine that provides various packaging options for beverage cans or bottles on a line. As well as processing the more usual packs such as wrap-around packs, trays, pads and film, the combined Innopack Kisters WSPP A machine can also wrap cans or bottle packs in paper. This machine is also modular, meaning that

[2] On what is known as a platform system the filler can be optionally converted by the customer to meet new market demands regarding other beverages or [r]PET containers. This makes the machinery sustainable and future-proof.

[3] **Note**
shrink tunnel energy consumption (calculation based on the following key figures).

Production days per year:	**230**
Effectiveness:	**80 %**
Production hours per day:	**22 h**

Tunnel designed for a 90,000-cph line in three shifts, five days a week.

This results in:

114.2 kWh x 22 hours x 230 days x 0.8 = 462,281.6 kW **= up to 46.23 MWh saved per year.**

existing Innopack Kisters Wrap-aroundShrinkPackers (WSP) or Innopack Kisters Wrap-aroundPaperPackers (WPP) can be retrofitted as a WSPP A. When a customer uses the paper-packaging option, the shrink tunnel is switched off; wrapping containers in paper means that no plastic must be used.

Innopal PLR high-performance palletizer

With its short pallet changeover times, intelligent robot technology and optimized pallet infeed design, this new palletizer can process up to 625 layers per hour, thus improving the overall equipment efficiency of modern filling plants. The palletizing system can be used on PET, glass and canning lines. Maintenance and service costs are greatly reduced by the use of state-of-the-art robotics; energy is also recovered during all delays in the palletizing process.

Life cycle

Durability and machine quality/improved performance

KHS develops and manufactures machines and system solutions that are in reliable use for decades. This is facilitated by a broad range of expansion and modernization measures that keep machinery flexible and future-proof. They enable production lines to be individually customized and retrofitted to meet changes in market demand. Each life-prolonging measure saves on resources yet still ensures fast provision and recommissioning of the required system solutions despite increasing shortages in the supply of energy and materials. Active discontinuation management also helps to lengthen a machine's service life. Switching over to new, further developed components in good time gives operators security in production and helps to bring their lines and machines up to date. The growing sensitivity to issues of sustainability on the market is also reflected in the specific customer interest being shown in conversion options that focus on alternative energy concepts and saving energy. Here, too, KHS provides a number of systems and solutions, also for older machines. Customers can individually configure these on the KHS Connect service portal, thus ensuring the long-term operation of their existing machinery.

Example further developments in the reporting period

Future-proof retrofits and expansions

Variety pack

With the variety pack, customers can give consumers the chance to try out a range of different products in one secondary pack. To this end, KHS provides a line configuration that, with its high degree of automation, makes it possible to produce variety packs in the high-capacity range for the very first time, processing up to 120,000 cans per hour, for instance. Each and every production site with a tray packer can be expanded to include this line configuration, making it unnecessary to invest in a completely new line for variety packs.

Ultrasound deposit avoidance

This system solution designed to reduce maintenance effort and improve the functionality of process-critical components and parts in the tunnel pasteurizer and bottle washer can be retrofitted on practically all of the named KHS machines.

Modernizations for operational reliability

Energy- and resource-saving conversions

Customers want to make economically efficient use of their filling line for as long as possible and thus save on resources throughout its entire life cycle. In many cases, regular modernization of the machines used means that a full new investment can be avoided. This procedure is gentle on resources and an important approach in the course of the debate on the protection of our climate, as modernization means that less new machinery needs to be procured, manufactured and installed. During the reporting period, in particular KHS has further developed a number of energy conversions that comply with legal directives.

Energy conversions

Latest-generation heater boxes are now available for InnoPET Blomax Series IV stretch blow molding machines and older models. The revamped heater box saves up to 45% energy over its classic counterpart.[1]

The intelligent Double Gate heating concept is now also available as a conversion option for the most recent InnoPET Blomax Series V stretch blow molder. It is based on tried-and-tested near-infrared radiation or NIR heating technology that is extremely energy-efficient.

[1] Consumption of the first-generation heater box compared to the current version.

It also takes up very little space and enables up to 30% in energy costs to be saved compared to single-lane stretch blow molders with the same output.

For the Innopack Kisters ST shrink tunnel KHS offers conversions for operation with electricity, a combination of electricity and gas or LPG. Here, depending on the option selected, the customer can also considerably cut emissions during machine use by having this run on green electricity or electricity generated by its own PV system, for example. Temporary solutions are also available for natural gas in the form of biogas that in 'production' at least is gentle on the climate. Mixing different sources of energy can also help to cut emissions.

The shrink tunnel can be operated with film made of up to 100% PCR (post-consumer recycled plastic) **without the need for conversion**. This is yet another area in which KHS helps to further reduce the carbon footprint at the customer's plant and reacts to the consumer demand for environmentally-friendly packaging.

In the future KHS will strengthen its focus on conversions that conserve resources and pursue this further. KHS has **more than 130 standard conversion options** currently viewable online that are being constantly added to and updated.

Preventive and digital support

Component discontinuation management continues to be an important factor for our customers, allowing them to produce with as few disruptions and faults on the line as possible. Machinery can be regularly modernized with the help of innovated electronic components in order to increase the overall equipment efficiency. Here, KHS enables its customers to specifically convert individual components that have been discontinued.

With the KHS Connect customer portal, KHS not only provides clients with a modern online shop function for an efficient ordering, service and procurement process but also individual information and advice specifically tailored to their machines. This encompasses service products, conversions and optimization options and the component discontinuation service described above.

Northern and Southern Europe plus the entire DACH region (Germany, Austria and Switzerland), the USA, Mexico, Brazil, East Africa, Nigeria and China can already use KHS Connect. This service will be rolled out further in 2023. Customers can track the progress of the rollout on the KHS Connect service website.

Internet of Things [IoT]

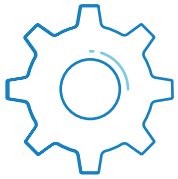
The new KHS Connect function of cloud-based live system monitoring has been available for use in Europe since the end of 2022 by machines that have the corresponding hardware and software. Monitoring performance and consumption figures across all connected lines enables potential for improvement to be identified and production to be even gentler on resources.

Furthermore, the KHS Technical Talks – digital online customer meetings format has also been introduced. At these events service topics such as conversions, retrofits and the sustainability of systems and solutions that improve production are presented and discussed with customers.

Technical Talks

KHS' Technical Talks are a fixed feature in its service portfolio. The company has provided its customers with full information on upcoming live webinars and the subjects these deal with on its dedicated service microsite since 2022. Registration is free of charge.

webinar.khs.com



Issues of sustainability in packaging development

Consumer protection, health and environmental friendliness

We develop packaging that is not only as environmentally-friendly as possible but also primarily enables consumers to enjoy beverages and liquid food products safely at all times.

As an expert supplier of packaging systems and solutions for the food and beverage industries, we clearly meet the growing demand from the public, politicians and consumers for packaging that is recyclable, safe and uses fewer resources. In essence, here we address the question of how we can help our customers to leave the smallest possible carbon footprint with their packaging system while providing optimum consumer safety and convenience. KHS develops its products further on the basis of these parameters.

Health

Responsibility for consumer health and safety

Our filling and packaging systems satisfy all aspects of safety (see "Filling and packaging systems", tab "Safety") so that our customers can fill and package their beverages in compliance with the strictest food regulations. Even before the actual filling process, through our process engineering we can guarantee a high degree of reliable protection against any microplastic particles for beverages. When using [r]PET containers to fill all kinds of different beverage, with over 40 years of expertise under our belt we have now further developed our stretch blow molder so that it can also process very light, unbreakable containers extremely well. These then pass through a safe, low-germ and low-oxygen filling process on our beverage container filling and capping machines. They are thus safely transported to retailers and consumers, well protected against all external influences.

Example further developments under the aspect of sustainability

The focus of all of our further developments is the protection of the consumer. Moreover, each new or further developed packaging system must be recyclable and satisfy increased demands regarding environmental friendliness. Our plastic containers made of up to 100% [r] PET thus already meet fundamental recycling requirements. Where suitable recovery systems are in place on the market, they can be fed back into the packaging loop in the long term and, in an ideal scenario, used to make new rPET containers.

Besides recyclability, energy efficiency also plays an important role. Another system that has been specially developed is our low-pressure [r]PET bottle base for carbonated beverages. This allows up to 15% less blowing pressure to be used and thus improves energy consumption during bottle manufacture.

At the moment, PET recyclate is a good and pragmatic solution which we carefully compare with alternatives made of renewable raw materials on a regular basis. There are already a number of promising approaches here that still have to be subjected to further testing, however. We examine all approaches with future potential in this field together with our partners in the packaging industry.

The environment

Holistic consulting and environmental friendliness

KHS' key area of expertise in packaging lies in its holistic consultancy service. This means that we not only advise our customers on [r]PET beverage packaging but also on container optimization for glass bottles and beverage cans. There continues to be a growing general trend towards light containers and thus material savings. The challenges here lie in the physical limits of developing containers that are light yet stable – and also safe and environmentally friendly. This is precisely where our Bottles & Shapes consultancy program comes in that bundles all of these aspects together in one sustainable container design.

In this context, KHS recently developed a new, lightweight 0.5-liter [r]PET bottle for carbonated soft drinks. For large containers holding liquid detergent, for instance, a new PET-based integral grip system ensures full container circularity.

In secondary packaging, film made of PCR or post-consumer recycled plastic is being put to increasing use. This material is made from packaging recycled by private consumers and is primarily used to substitute virgin film. Plastic-free packaging systems made of paper or even those that do not use any secondary packaging at all are also becoming more prominent. With its Nature MultiPack, since 2015 KHS has offered an extremely minimalist style of packaging that turns [r]PET containers or cans into packs using dots of adhesive only. The customer can also opt for a system that applies a recyclable pack handle made of 100% PE. With just 4.4 grams of CO_2 equivalents for a pack of six 330-milliliter containers, Nature MultiPack makes it one of the most sustainable types of KHS secondary packaging systems on the market to date. The aim is to constantly improve the ecobalance for all KHS packaging equipment.

DIN ISO EN 14067
ISO EN 14067 is a standard used to develop the product carbon footprint and provides companies with a suitable basis with which to identify, balance and verify greenhouse gas emissions produced throughout the value chain of a product or service.

Global Warming Potential (GWP)
Greenhouse gases have differing global warming potential or GWP. This references the impact of all greenhouse gases to carbon dioxide (CO2). The GWP thus acts as a conversion factor used to express the equivalent of a greenhouse gas to CO2.

Ecobalance calculator for secondary packaging

KHS' Secondary Packaging Competence Center has developed a calculator tool that in the future will be able to compute the ecological footprint for all types of KHS secondary packaging. This gives customers the chance to select the best packaging system for their requirements. Customers have long been familiar with this consultancy service offered by the KHS [r]PET experts. Now they can also apply this to secondary packaging to improve their decision-making processes. Current market developments show that lots of customers believe that in particular the packaging itself holds great potential for cutting carbon emissions within their value creation process.

IFU, a software company specialized in sustainability consultancy, among other topics, with its many products independently validates the various parameters here. It also already supports our [r]PET experts.

Calculations of the product-specific greenhouse gas balance for the packaging are certified according to DIN EN ISO 14067 in CO_2 equivalents (CO_2e) in grams. This takes the different global warming potential or GWP of the greenhouse gases into account..

Example further developments in the reporting period

[r]PET packaging systems

Circularity/weight reduction: fully recyclable new lightweight container concept KHS Loop LITE

Our new KHS Loop LITE [r]PET packaging concept combines numerous ecological and economic benefits in a single bottle. The container consists entirely of rPET and is completely circular. A high degree of product protection is provided by a special barrier coating of ultra-thin glass that is the only recyclable barrier recognized by the EPBP (see info box). We have been able to practically double the shelf life of beverages filled into the KHS Loop LITE compared to the standard brand bottles currently in circulation.

The new container design has also reduced the weight of the 0.5-liter bottle by up to 25% in comparison with the current market standard.

With this development we have cut the packaging's carbon footprint by around 60% compared to similar packaging systems made of new, uncoated PET.

The **European PET Bottle Platform (EPBP)** is a voluntary industry initiative that provides PET bottle design guidelines for recycling. It tests and assesses new and further developed PET container systems as to their feasibility for bottle-to-bottle recycling. In this way the platform aims to further support and promote the circular economy in the beverage and food industries. Find out more

Integral grip systems made of [r]PET promote circularity

A new and stable grip system makes products extremely convenient for customers to handle. Food and home care products are now also supplied in large, round and oval [r]PET containers with an integral clip-in or glued-in handle that gives consumers especially ergonomic bottle handling, saves on material and is extremely stable. As this system only uses a single material (the handle is also made of [r]PET), it scores extra points for circularity. Using [r]PET is also a major prerequisite for the container being returned to the closed recycling loop after use.

The **Association of Plastic Recyclers (ARP)** is a North American trade association which strongly advocates the recycling of all post-consumer plastic packaging. To this end, the association draws up design guidelines, for example, and recognizes packaging design innovations that meet its stringent guiding principles governing recyclability, among other criteria. Find out more

Secondary packaging systems

Pack made of 100% recycled film

Customers can also use film made of 100% recycled material on all KHS Kisters shrink packers. This cuts the carbon footprint by up to 65% in production compared to virgin film.

This alternative is safe, clean and meets all quality packaging requirements. In most cases it is possible to switch over to recycled film immediately; this can then be used directly without the need for any conversion.

Operational ecology

Corporate environmental protection in focus

Corporate environmental protection at KHS

Energy and resource efficiency targets

As one of the world's leading providers of beverage filling and packaging systems we are well aware of our responsibility to act in an environmentally-friendly manner. KHS questions the consequences of the impact its production operations have on the climate and our natural surroundings and aligns its business and manufacturing activities with decarbonization and resource-conserving targets. KHS makes products that require the use of energy and resources. Further reducing the amount of the above needed by our company is one of our key tasks in the coming years and tarries with our own understanding of responsible and sustainable business practice. The growing significance of corporate climate and environmental protection is also mirrored in the current geopolitical crisis with its insecure energy supply and unstable global supply chains, in the increasing number of regulatory requirements and the expectations customers, financial markets and society have of our company.

All told, by exercising corporate environmental protection we can create considerable leverage: with each optimization in relation to climate protection and energy and resource efficiency, we achieve a much better overall balance for the environment – and at the same time also improve our economic basis and efficiency.

Decarbonization measures implemented as part of our corporate climate and environmental protection program also reduce our dependency on fossil fuels and thus help to boost the security of supply. This further illustrates how KHS exercises corporate responsibility, particularly with regard to the energy crisis in 2022.

Find out more about our environmental management program and the measures we are taking in production, logistics and transportation.

Targeted implementation through environmental management

Local solutions for environmental challenges

Corporate environmental protection is fully integrated into all processes and workflows at KHS, with the focus on saving energy and resources in production. KHS manufactures at ten plants worldwide. The company universally tracks the development of Group-wide standards governing energy and environmental management that at the same time allow decentral regional solutions to be drawn up. This procedure takes local environmental challenges into account. Furthermore, in this way tailor-made measures can be developed and realized for the production processes specific to the respective factory. These include the gradual conversion of lighting to LED technology, for instance, or the constant optimization of heating and air conditioning systems. Regarding actual operation, during production-free periods we shut down our compressed air generators and regularly check all systems for compressed air leaks. We are successively further expanding our building management systems to identify and control flows of materials.

Six of our ten KHS production locations have an energy and an environmental management system in place that are certified according to the internationally recognized ISO standards 50001 and 14001. We are currently testing a suitable procedure that would facilitate the transfer of these management systems to our other four production sites in Brazil, China, Mexico and the USA.

Regular internal audits and monitoring and recertification audits carried out by external, independent bodies confirm the overall effectiveness of our systems of energy and environmental management.

Teamwork and best practices

Energy and environmental management is a central module in KHS' holistic production system. This is where the strategic targets and objectives for all production sites are specified and the requirements for local implementation defined that encompass the entire production process up to and including installation.

Moreover, at all KHS facilities specialized energy and environment teams ascertain where there is need for improvement and independently devise measures on this basis. These teams are themselves operatively responsible for monitoring and realizing the given measures and for carrying out internal audits. Measures are evaluated and experiences exchanged at regular intersite team meetings. In addition, once a year the site teams meet up with KHS headquarters to jointly push the further development of the relevant guidelines and measures and to re-coordinate a number of other issues such as current consumption and energy targets. This networking and coordination ensure that all plants are always up to date. The individual teams can exchange information on best practices within the individual sites and find out about new tried-and-tested measures that have already been successfully implemented at other factories. By way of

supplement to the above, ideas submitted by the workforce through the company suggestion scheme are assessed by the energy and environment team and the respective entrant awarded a prize.

Our central energy-saving targets are set in the annual management review. Superordinate risk and opportunity analyses of our energy and environmental management program are also included in the management review. Besides the results of the review, further key figures and information on goal achievement or tips from the energy and environment team can be accessed on the Intranet by all KHS employees.

For 2025 KHS has formulated concrete reduction targets for our electricity, natural gas, heating oil, water and diesel resources. These targets are regularly monitored by our energy and environmental management system, allowing them to be readjusted if there are any substantial changes in circumstances.

We can only reach our energy and environmental management savings targets if all KHS employees are extensively involved. Key measures to this end include our annual safety briefings, regular sustainability days, screens that provide information on energy and environmental issues installed in our canteens, our KHS family day and the company Intranet. Our workforce engages with these tools and events and is motivated to also take part in projects that adopt an innovative, long-term approach to local environmental and climate protection. One such example is MaGeno-Solar eG , founded in 2022. With over 170 members (numbering personnel from all KHS sites) the foundation has now been laid for the funding and installation of photovoltaic systems. KHS GmbH will act as lessee and operator. Installation of the first system started at the beginning of 2023 at KHS headquarters in Dortmund, with other sites to follow.

Our goals for 2025

Energy consumption	Status quo[1]	Goal 2025[2]
Electricity consumption	-18,2%	-8,9 %
Heating consumption [natural gas, heating oil]	-22,6%	-4,9 %
Water consumption	-36,7%[3]	+1,1 %[4]

[1] as of 2022; percentages refer to base year 2018
[2] percentages refer to base year 2018
[3] significant savings thanks to the introduction of home office measures at the start of the Covid-19 pandemic.
[4] slight increase in absolute values as a result of the rising number of commissioned lines/machines. Our aim continues to be to keep water consumption down to a minimum in individual cases.

ALL KEY FIGURES

Optimization of resource and energy efficiency

Active contribution to the protection of the environment

Within our system of energy and environmental management, one key approach at KHS is to constantly increase our efficient use of energy and resources at all of our production sites. Switching over to regenerative sources of energy is an important step towards reaching our climate and environmental targets.

We have implemented concrete measures that put KHS' energy and environmental management policy into practice not just regarding the manufacture of our plant machinery in our production shops but also the entire production environment. For example, our offices, vehicle fleet and logistics setup harbor significant potential for improving our energy and resource efficiency.

The heating energy we need for our buildings is currently still being provided by fossil fuels – chiefly by natural gas but also on a smaller scale by heating oil. In order to safeguard its operations, KHS has decided to continue to use its oil heating systems to circumvent problems caused by a possible lack of gas as a result of the war in Ukraine. A project planned in 2020 aimed at initially converting an oil heating system over to natural gas will now be realized in 2023.

The amount of energy needed for our production machines, lighting and air conditioning, our IT infrastructure and operating materials is considerable. Our projects designed to specifically optimize production greatly help to boost our energy and resource efficiency (see our table of key figures).

All of our technical innovations in the production environment have yielded substantial efficiency benefits over the course of the last few years. In 2021 and 2022 the lighting was converted to LED technology with each office refurbishment and in select projects. By installing new lights and intelligent lighting control our building technology system allows considerable savings to be made. The projects realized in the reporting period have enabled us to consume 432,000 kWh less electricity per annum.

As part of our commitment to climate protection, KHS in Germany has been using certified electricity from renewable sources since 2016. Thanks to our continuous use of certified green electricity, in 2021 and 2022 we were able to further cut the carbon equivalent emissions at our German production sites by a total of 10,788 metric tons. The planned installation of our first photovoltaic system at the production site in Dortmund by the MaGeno-Solar eG company founded by KHS employees underlines our mutual commitment to local climate protection, from which KHS GmbH profits as lessee.

Regarding the use of water in our operations – corporate water management – we endeavor to keep our site consumption of this precious resource as low as possible, especially during test runs on the lines and machines that require water, such as our pasteurizers and washing machines in Dortmund and our process engineering systems and filling machines in Bad Kreuznach – plus of course in all of our kitchens and sanitary facilities throughout the Group.

432,000 kwh/a
less use

10,788 t
CO_{2e} emissions saved

ALL KEY FIGURES

Energy and resource efficiency through production optimization

The efficient use of energy and resources in our production processes is a key focus of our energy and environmental management system and an important pillar of KHS' ecological balance.

Short manufacturing and assembly lead times generally help to make production gentler on the consumption of energy and resources. Here, we center especially on the material flow in production and our use of consumables.

In 2021 three chief materials were used throughout the entire KHS Group: in total, approximately 8,800 tons of stainless steel, 7,500 tons of carbon steel and 1,800 tons of plastic were procured and assembled – partly in an intermediate process at our in-house production unit on site.

When producing components, fewer resources are consumed if several manufacturing steps are carried out on just one machine. KHS' Sheet Metal Manufacturing Department impressively illustrates, for instance, how a number of different work processes can be performed on one combined punching/laser machine. Automation cuts down on the consumption of energy and media (such as industrial gases) and the amount of transportation required within the company. Prior to production, 3D simulation of our sheet metal bending processes is used to check for plausibility and for validation; this advance technical clarification procedure results in far fewer rejections. In addition, energy-efficient conveying technology at our sheet metal warehouse enables energy to be partially recovered.

Closed loops, waste separation concept and returnable load carriers

We are making further key contributions to the conservation of resources by changing over to ecofriendly materials and closed loop systems and by reducing or avoiding waste and the influx of contaminants. Furthermore, in spring 2023 a new waste separation concept was introduced in production that is already in use in two pilot areas at our Dortmund factory. It will be successively rolled out to our other KHS production sites.

ALL KEY FIGURES

Logistics and traffic – vast potential for the climate and the environment

Optimum planning of prime importance

KHS has made it its aim to reduce its movement of people and goods and thus cut down on greenhouse gas and toxic emissions to avoid pollution harmful to both humans and the environment. Here, it is extremely important that the traffic of goods within the sections of the supply chain we hold sway over is perfectly planned and coordinated. Huge potential in this field lies in the optimization of air freight, for example; timely planning enables high emissions to be reduced and economic efficiency to be improved. Another important measure that cuts down on emissions is to combine various shipments to avoid empty runs. Thanks to intensive networking with our haulage carriers, we have been able to specifically improve capacity utilization. For KHS, regular checks of the logistics partners we use to see whether they comply with our sustainability targets or not is a necessary requirement for cooperation.

The digitalization of all of our internal and external processes is steadily helping to achieve the greatest possible efficiency. Furthermore, the use of new IT tools and systems prevents unnecessary documentation on paper. For example, our shipping/logistics unit calculates individual projects, especially those with a larger volume, with the help of an approved carbon calculator and in doing so optimizes the means of transportation selected right from the outset.

Like us, the select freight forwarders we work with also attach great importance to cutting down on emissions and in some cases already have their carbon emission reduction achievements audited. No complete and dedicated data on traffic and transport carriers in logistics is yet available for the reporting period. In the future a systematic data collection process will provide precise and verifiable information here.

We ship our products in reusable packaging made of long-lasting materials; wooden pallets are used for the transportation of machines and sustainable materials for the housing and secondary packaging. Here, KHS constructively consolidates all of the materials for the project while conserving resources. On certain shipping routes and in agreement with our customers KHS tailors the use of packaging materials to the transportation requirements. In individual cases this can result in doing without any packaging material whatsoever.

Vehicle fleet, business trips and employee commuter traffic

KHS GmbH's own vehicle fleet is managed by our headquarters in Dortmund and consists of approximately 300 vehicles. In the future the fleet is to be converted to alternative, more environmentally-friendly drive concepts, such as electric or hydrogen-powered cars with all of the necessary infrastructure. In 2022 six charging stations were installed at KHS GmbH headquarters in Dortmund. More charging stations are to be erected in 2023 at our other German KHS sites. KHS also works closely with the Salzgitter Group when planning charging concepts.

For business trips our employees will make increasing use of ecofriendly forms of transport in the future. At the moment KHS personnel travel for business purposes in their own cars, leased vehicles or those in our fleet or by rail or plane. By collecting extended data on our business traffic, we are gathering information on future savings potential. The constant implementation and use of video conference systems is a further means of generally reducing the amount of business travel at KHS. Moreover, through local production and the decentral structure of our global KHS service network we ensure that first and foremost our customers can rely on receiving local support. This not only means huge cuts in travel emissions but also saves time and money.

ALL KEY FIGURES

Social

Future-oriented employment as a guarantee of success

Strategic positioning

The people directly and indirectly connected with KHS form the core of our responsibility to society. First and foremost, we focus on our employees and their families, our customers and suppliers and the communities where our production sites are located. We are convinced that the key to the success of our company lies in mutual esteem and fair cooperation.

Here, our employees are our most precious commodity. They shape the future of our company; our success and progress depend on them. KHS thrives on the expertise, commitment and innovative spirit of its entire workforce. For us, good working conditions and an open environment defined by respect and appreciation are therefore a basic requirement. Flexible working hours, remote work options, an attractive and appreciative remuneration structure and a healthy and safe working environment are just a few examples of this. Another major focus lies in specifically involving our personnel in company matters. Our employees' experience and many years of expertise help to shape our change and improvement processes to the benefit of all concerned.

Comprehensive strategy

The central challenges to society we face today encompass not just climate change but also the development in our demographic, meaning that fewer much-needed qualified experts are available, plus digitalization and the resulting changes this brings to the world of work.

KHS GmbH rises to these challenges in the context of its social responsibility. Embedded in its corporate personnel policy, the company has thus implemented a human resources strategy that defines four fields of action:

1. Digitalization and process efficiency
2. Modern working environment
3. Assurance of skilled labor
4. Personnel development.

For each of these fields of action we have devised numerous measures that are being implemented step by step. These center on optimizing the recruitment of young professionals through qualification initiatives, fostering potential, strengthening employee loyalty and making HR processes as efficient as possible. A targeted change management system supplements the activities that result from the above fields.

Our employees are at the core of our HR processes. Here, a perfect working environment protects the health of our personnel and encourages their performance, motivation and productivity. We specifically promote and make especial demands of our high performers and people with potential. The skills and knowledge of our workforce hold the greatest value for us. In this light, an excellent personnel development scheme and outstanding programs of basic and further training are valuable tools. We ensure a specific transfer of knowledge in order to keep our expertise in the company. In all of our activities we take the demands made of our employees specific to their stage of life into account and in doing so bring about a change in social priorities within the company.

With our HR strategy we aim to further increase our company's competitive edge and innovative skills, provide our workforce with optimum chances for advancement and shoulder our responsibility to society.

Future-oriented employment as a guarantee of success

For KHS, providing someone with a future-oriented, fair and secure job is of high business relevance and a guarantee of the success of our company. Some of our customers require that we hold certificates on sustainability and social responsibility, for instance. Here, we have been able to provide proof of consistent SEDEX SMETA certification since 2012 and an EcoVadis certificate since 2015.

The working conditions at our company are a key deciding factor when attracting new employees. At a time of fierce competition in the drive to recruit and commit specialist workers, we find it both essential and elemental that we offer our personnel an excellent working environment, ensure fair working conditions and hold them in high regard.

Our personnel can depend on us as their reliable and strategic partner at all times. Our work together is built on a performance culture based on trust, respect and esteem, with fair and cooperative partnership. For all of our futures we wish to continue to motivate our employees with this perspective and attract good, new team members to KHS.

Trusting partnership

It is important to our employees that their interests are represented across a broad spectrum. This is a basic prerequisite if we are to work constructively together on an equal footing. This is ensured by trade unions, work councils and other employee representative committees according to the legal basis. The Executive Management Board regularly confers with these associations on the company's development and analyzes the working conditions that derive from this. This trusting and constructive cooperation has a positive impact on our social standards.

KHS wishes to ensure that all regulations that must be observed during company activities are adhered to, such as the relevant laws and our in-house rules (for example, our code of conduct and compliance guidelines). To this end, our personnel receive instruction on topics such as compliance and data privacy on a regular basis.

Our production companies outside Germany are included in the drawing up of our corporate guidelines and memoranda. This extends the range of application of our national standards. Internationally applicable standards/regulations thus respect the relevant local provisions.

KHS is convinced that with our HR strategy and the measures derived from this we are well prepared for the challenges of the future. Under the auspices of our HR strategy we can rapidly adjust to all changes to society and always cater for the needs of our workforce in an appropriate manner. Only in this way can we meet our social responsibility.

Ensuring success with targeted personnel management

Satisfaction and corporate co-determination in focus

With targeted personnel management and handling of our working conditions, KHS lays the foundations for the success of our company in the long term.

In this respect, our system of human resources management is specified centrally by the Group for all production sites. The requirements are defined by Salzgitter AG with the Group mandate, a data administration system for personnel issues and processes. This ensures that all of the necessary IT and data privacy standards are met. The Central Human Resources Division controls the issues that concern all production sites centrally from our headquarters in Dortmund. This is where our strategic functions are also anchored. Furthermore, HR officers are appointed at the respective plants who regularly exchange information on goals, measures and developments, thus assuring proximity to employees and user departments.

We are convinced that not only financial goals contribute to the success of the company in the long term. When drawing up agreements with our executive managers, non-financial key figures also play a role. For several years now we have thus fixed annual targets Group-wide in order to intensify the further training of our workforce and further reduce the number of accidents.

Co-determination on an equal footing

We find it particularly important to inform and involve our employees at an early stage in order to identify together potential for the further development of working conditions and the working environment. The way in which personnel are involved varies from plant to plant in order to respect the different legal requirements. In Germany, each production site has works council committees, young person's and trainee representatives (JAV) and severely disabled person's representatives (SBV). These belong to the joint works council, joint JAV and joint SBV respectively.

There have been no major changes to the company within the reporting period.

Special topics, such as occupational health and safety and basic and further training, are dealt with in dedicated committees. If there are larger changes to the company, we work towards a fair reconciliation of interests and social compensation plan together with the employee representative committee.

At our German production sites a number of company agreements have been negotiated with the works council to strengthen the interests of our workforce. They govern the rights, obligations and obligatory standards for personnel. These include company agreements on the following topics, among others:

Workplace health promotion

- Training
- Inclusion
- Addiction prevention
- Company suggestion scheme
- Continuous improvement process (CIP)
- Flexible working hours
- Remote work.

One important aspect of our HR strategy is the KHS code of conduct that focuses on the respectful treatment of one another, among other things. This is described in detail in the chapter on compliance management.

Adherence to the agreed regulations of both our code of conduct and our company agreements is very important to us, which is why KHS substantiates this with various audits and tests as a matter of course. These include:

- Assessments for exceeding work time limits
- Internal company revisions
- Cooperation with the employers' liability insurance association
- Internal occupational health and safety audits
- External audits and certificates such as EcoVadis.

Fairness and esteem

Our day-to-day dealings with one another, the working conditions on site and the salaries and additional benefits we provide are seen by our employees as a mark of our esteem and a sign of fairness. If we are to commit our employees to the company in the long term, it is very important that they have a sense of purpose in their own work and receive recognition for it. The current implementation of agreements governing remote work since July 2022, for instance, regulations on leave of absence and working hours are further aspects. Long years of service to the company and a low fluctuation rate are both indicators of the level of satisfaction among our employees.

KHS personnel are employed based on collective wage agreements or individually negotiated tariffs. Salaries consist of a fixed sum and a fair performance-oriented allowance. The respective collective wage agreements of the metal and electrical industry apply, to which KHS is committed thanks to its membership of various trade associations. In addition, KHS pays portions of earnings above the pay scale, such as a higher premium for overtime. Moreover, our company car guidelines clearly regulate when employees can make use of one of the vehicles in our fleet.

Further extra benefits include our company pension schemes, such as the MetallRente and SZAG Model programs, and an occupational disability and accident insurance plan. Our employees can make their own contribution to their later financial situation through our company pension program: here, they save a percentage of their salary for their retirement that is then topped up by the company. External specialists advise here on investment options or compensation for inflation, for example.

18 years

Average years of service for the company

46 years

Average age of the core workforce

ALL KEY FIGURES

Transferring knowledge and fostering talent

Basic and further training at KHS: a win/win situation for all those involved

Well-trained, committed employees are the key to the long-term success of KHS. Personnel development therefore has a high priority at KHS. We aim to foster talent, transfer knowledge and valuable expertise to our workforce and retain their loyalty in the long term.

We have identified three key challenges with regard to personnel development:

1. Demographic change: in the next few years many of our experts with their extremely valuable knowledge will leave KHS and retire.
2. A general lack of specialist workers in the industry that will also hit KHS.
3. Digital transformation that is making frequently changing demands of employees and executive managers and calls for new learning concepts in particular.

In answer to these challenges we have devised numerous measures as regards personnel development as part of our HR strategy that in turn is embedded in the policies stipulated by our parent company Salzgitter AG.

TransferWerk: transferring and safeguarding precious knowledge

In conjunction with the change in our demographic and our transformation from an industrial society to one based on knowledge, KHS is systematically implementing its TransferWerk process. This structured and moderated method of knowledge transfer passes on expertise critical to success and relevant to the company harbored by someone due to leave the company to their successor and is thus permanently retained for KHS.

In the 2021–2022 reporting period 16 knowledge transfer processes were successfully realized and supervised by Personnel Development. In addition, 40 employees were trained in house in the TransferWerk method to help promote this further within the company.

Our knowledge transfer process starts with preliminary talks in which the executive manager, knowledge provider and knowledge recipient take part. General conditions, requirements and expectations are discussed and a good personal basis for the transfer of knowledge is established. The creation of a job map is at the core of this method. With the help of special software, the knowledge and experience of the knowledge provider are actively requested, systematically recorded and structured. This enables the various fields in this person's knowledge to be prioritized and broken down into details for handover to their successor..

Group-wide transfer of knowledge

We exploit the potential of knowledge transfer above and beyond the boundaries of our individual Group companies. Group-wide exchange was initiated several years ago with our KONZA program (short for "KONZernweiter Austausch") to intensify cooperation throughout the Group. This initiative is derived from the Group-wide YOUNITED mission statement and encourages employees of Salzgitter AG and all its companies to see work processes, methods and expertise in the same light. Various workshops, idea labs and internships give employees an insight into how people in other departments work and thus identifies new areas of potential for process improvement.

In 2021 an intercompany workgroup was formed within the Salzgitter Group that explores to what extent the TransferWerk method is conveyed within the Group companies and how this can be gradually better applied. Together

with the intercompany workgroup a Group-wide knowledge transfer network was set up that is not only capable of implementing the TransferWerk method in the companies but also develops new expertise through this regular exchange of information.

Training, fostering and retaining skilled workers

We have entered the competition for skilled workers at our company with a wide range of forward-looking training options. Each year we hire around 50 apprentices and trainees throughout Germany and attach great importance to imparting knowledge using a number of different formats right from the very start. Over 80 percent of our trainees are taken on for an unlimited duration, meaning that we satisfy much of our demand for specialist personnel ourselves. The spectrum of courses we run is large. Besides internships for high-school and university/college students and work/study programs, we also offer apprenticeships for the following careers:

- Mechatronics engineer (m/f/x)
- Electronics engineer (m/f/x)
- Metalwork specialist (m/f/x)
- Industrial clerk (m/f/x)
- Machining mechanic (m/f/x).

Interested young professionals can also apply for the following dual work/study programs:

- Industrial engineering
- Mechanical engineering
- Electrical engineering
- Business information technology.

In addition, we also operate special trainee programs for graduates and our post-apprenticeship courses Fit4Commissioning and Fit4Service. These specifically build on the basics learned during training and allow people to specialize in what could be the first step towards an expert career.

With our special Fit4KHS onboarding program we ensure that new employees have the best possible start at our company and are given the chance to familiarize themselves with our structures, procedures and team members early on. This also includes instruction in an area that is extremely important to us: occupational health and safety.

We want to keep and continue to foster people who have started out with us as a trainee or executive manager and have settled in well and made a good contribution to the company. This results in a clear win/win situation: employees continue to develop and amass knowledge in specialist areas that can be directly applied. We as a company counter the lack of specialist workers by recruiting new expert personnel ourselves and earning their loyalty as their qualifications are precisely tailored to their job and they can become involved in the company.

Effecting the digital transformation

Digitalization is changing the way we work – and will impact the working world of tomorrow in particular. We have to adapt to this now and continue to steadily build up new areas of expertise in the future in a life-long learning process. It is important to adjust this to the needs of our employees and make access to this expertise as simple as possible. This is why we are developing new concepts throughout the Group and assisting learning processes, also using software, in a dedicated Group learning management system.

KHS campus

We have instigated a diverse range of further training options for our workforce at our in-house KHS campus academy. It is available to all personnel and provides courses in soft skills (such as IT, languages, communication and methodological skills) as well as in a broad range of technical subjects. In order to prepare our employees as best we can for the changes in working conditions, we regularly assess further training requirements and adjust our KHS campus program accordingly. Our further training and personnel development measures are also provided digitally in the form of webinars, for example. On request Personnel Development also devises courses of further training for entire departments.

Step4Future

Another module in our personnel development program is our Step4Future system of talent management. It specifically promotes those with high potential and supports them through a mentoring program. The first program run brought 19 participants together with mentors specially selected to suit them. Besides developing their expertise in five workshops and training sessions, as there is a fixed study group those taking part have the chance to build up an interdisciplinary network within the company. At KHS talented individuals can also participate in our own special management development program entitled Fit4Leadership and in personnel development programs run by Salzgitter AG. Management lectures and experience discussion groups round off our range of educational services.

Careers for women

It is important that we offer women at KHS the same opportunities for development as their male colleagues. For this reason we have signed up to Salzgitter AG's Career paths for women orientation program that addresses female employees who wish to specifically plan their career and aspire to a managerial role within the Group. The orientation program primarily concentrates on issues such as professional goals, skills, experience and whether a managerial or expert post is preferable.

Another measure in place is our mentoring program for women derived from the FORWARD personnel development scheme offered by Salzgitter AG. Here, participants have the opportunity to talk to mentors from the executive management about how best to plan and develop their career. Introductory and concluding sessions with the Salzgitter Executive Management Board and individual workshops staged by external providers complement this program.

CIC honors top trainees from the region

On April 8, 2022, two former KHS trainees from Dortmund were commended for their outstanding final A-grade exams at the 2022 best-in-class event staged by the German Chamber of Industry and Commerce. At the formal ceremony they were honored for their exceptional commitment and success during their period of training.

The apprenticeships successfully completed by all other eleven KHS trainees (seven mechatronics and four electronics engineers) in the class of 2018 are equally worthy of mention and recognition: three examinees passed with a C grade and eight were given a B. The group includes two dual work/study electronic engineering students who completed their training with a B in just 2.5 years.

ALL KEY FIGURES

Heightening awareness of occupational health and safety

From instructions and training to OHS software

As a production company, occupational health and safety or OHS is especially important to KHS. This applies in particular to our manufacturing and assembly departments and during our commissioning or service assignments. We constantly monitor and invest in occupational health and safety measures in order to give our workforce the best possible protection against health hazards with the help of training courses and modern technical systems. Even if we have been able to further lower the number of accidents in the past few years – our goal is Vision Zero – unfortunately there were several accidents at work at our KHS factories during the reporting period.

We systematically analyze every single industrial accident that results in lost time. Additional protective measures are then derived from this and we check that our occupational health and safety processes are adhered to. Although we have continued to further improve our technical occupational health and safety measures, accident analysis reveals that an increasing number of accidents is caused by incorrect behavior. It is often personnel themselves who are not always aware of a potentially dangerous situation. This is why we focus on continuously strengthening people's attitudes towards occupational health and safety. The aim here is to change habitual patterns of behavior that can cause mistakes and accidents.

Our OHS measures are based on Salzgitter AG's group guidelines on occupational health and safety. KHS GmbH's occupational health and safety management program has been ISO 45001 certified at all German production sites since 2019. Our factory in India also has an OHS management system in place. Internal audits and various other measures ensure that our Group-wide OHS regulations are complied with. Occupational health and safety is managed at a local level at our plants in Germany, meaning that each production site has its own occupational health and safety officer. The head of the KHS Occupational Health and Safety Department coordinates our local OHS officers and makes sure that all guidelines and requirements are uniform. This ensures that all of our factories have the same high standard of occupational health and safety. The head of Occupational Health and Safety is in regular contact with the Salzgitter AG Occupational Health and Safety Work Group, enabling experience in this field to be shared across all Group companies.

Quentic OHS software: always up to date

As our executive managers act as role models, how they behave is extremely relevant to occupational health and safety at KHS. They therefore sign what is known as a transfer of duties when they join KHS; this regulates all standard responsibilities with respect to occupational health and safety, environmental protection and energy management. These responsibilities also include instructing employees and ensuring that first aiders are appointed. Moreover, executive managers draw up hazard assessments using the Quentic OHS software. This was introduced in Germany in 2019 and helps us to identify and assess hazards so that we can take suitable measures to minimize these.

Accidents, near-accidents and entries in the accident log are recorded digitally so that executive managers and OHS officers receive direct notification and can follow up any incidents accordingly. Lost-time accidents and accident log entries with a high risk potential are systematically analyzed with the help of the software. This means that a digital file is created for each incident. The aim of accident analysis is to derive protective measures to prevent accidents of a similar nature occurring.

Quentic is also used to prepare and maintain hazard assessments. To this end, all hazard assessments are split into five categories:

1. Hazards posed by the main activity
2. All hazards on the plant premises or in the vicinity of the workplace
3. Organizational hazards, such as regular instruction and first aid
4. Hazards for pregnant women and those breastfeeding
5. Psychological stress.

With Quentic executive managers and OHS officers have clear and targeted access to information contained in the hazard assessments and to all accidents.

Occupational Health and Safety Committee

There is an Occupational Health and Safety Committee (OHSC) at every German site that convenes regularly. At these meetings all incidents are discussed and strategic measures decided upon. Here, the appointed committee members have the chance to examine occupational health and safety at work from various perspectives, optimize processes and develop measures for the implementation of OHS objectives.

Travel risk management

We run a travel risk management program specifically for installation sites outside Germany and travel to and from the same that enables all risks to the employees concerned to be assessed in advance. Any measures deemed necessary can then be derived based on this information. Further travel risk management measures include our HSE (health, safety and environment) manual for installation sites, HSE audits on installation sites and the provision of support for employees regarding medical issues and travel safety by our external services provider International SOS.

All employees in focus

We implement an extensive range of measures to help sensitize our personnel to issues of occupational health and safety on a continuous basis. These include in particular:

- Topic of the month: this is a one-pager that centers on various issues of occupational health and safety and environmental and energy management. It is distributed to all executive managers every month and discussed with employees during team meetings. Furthermore, what we call sustainability days are regularly held at our German production sites, during which occupational health and safety issues are also addressed.
- Training programs for various employee groups in the company: our Fit4KHS seminar provides new personnel with all of the relevant information they need, including on occupational health and safety. We also run other training courses that deal with travel safety.
- KHS executive managers play a key role when it comes to occupational health and safety: in cooperation with our Occupational Health and Safety Department they are offered more in-depth further training through KHS campus. Examples include our Fit4Leadership seminar series and courses on OHS software and an OHS-compliant style of management.

Responsibility for employee health

During the reporting period the corona pandemic greatly compromised our corporate health management program. KHS GmbH reacted to the outbreak of Covid-19 by introducing a catalog of appropriate measures, thus protecting people's health and ensuring that they were guarded against infection during this difficult epidemiological situation. Examples here include the setting up of a corona crisis management team, establishment and continuous updating of a company hygiene concept, free corona vaccinations and regular information bulletins for employees.

Regarding general health, we also motivate our employees to make use of KHS' in-house fitness and prevention program. In 2019, for instance, we were able to conclude our healthy backs in the workplace program: a health manager visited every single workplace at KHS and advised

employees on ergonomics and the daily processes they execute at their workstation. The departments and OHS officers then logged, prioritized and implemented the tips for improvement received from the health manager.

With all of these measures, our aim is to promote and improve the health of our personnel. In addition to offering seminars on stress management, resilience and mindfulness, employees suffering from psychological stress can also contact our occupational health service. This is responsible for workplace integration management following psychological treatment.

We also provide ideas for active lunch breaks to encourage active health care. This had to go digital during the corona pandemic. Our digital active lunch break was received extremely well across all of our production sites and was also offered in 2022 independent of corona restrictions. In addition, the company health management program steering committee also meets at least once a year to debate new measures and ideas that further foster the occupational health and safety of KHS employees.

Corona crisis management team

During the Covid-19 pandemic KHS called a crisis management team into being at management level that meets regularly and also involves the Executive Management Board. A list of measures was drawn up that describes the preventive action taken, including responsibilities and data on measures completed. In addition, employees can address any queries or concerns they have on this subject to a dedicated Covid-19 email account. All emails are processed quickly and directly by the crisis management team.

ALL KEY FIGURES

Local commitment – our obligation to our site locations

Focus on educational partnerships

Our policy of social commitment is derived from Salzgitter AG's group-wide site concept that defines criteria for the systematic and transparent promotion of cultural, social and sports projects and initiatives. The key aim of this concept is to improve the quality of life in the communities where our employees live. This in turn endeavors to strengthen and make visible the regional commitment shown by our respective company production sites. KHS' commitment to society thus primarily takes place at a local level.

Many of the funding requests for social projects are directly addressed to us by our committed workforce. It is worth mentioning that in lots of cases our personnel have waived their own premiums to the benefit of these charitable institutions – such as the Control Cabinet Manufacture Final Assembly team who have provided the St. Vincent Jugendhilfe e.V. in Dortmund with financial support. The successful social 'wish tree' project in Dortmund that grants children at a local hospice a Christmas wish was also initiated by KHS employees.

A total of €111,000 was donated to charitable projects during the reporting period.

Focus on educational partnerships

Our commitment to society at a local level focuses on sponsoring community projects on the one hand, such as the Dortmund food bank, and on supporting long-term educational projects on the other. At our plants in Dortmund and Kleve especially lots of long-term educational partnerships have already been formed as a result. For example, we present our spectrum of apprenticeship and job profiles as part of our educational partnerships with local schools. In doing so, we make direct contact with school students and offer them extensive advice on related topics such as their personal life plans and career paths.

111,000 €

was donated

ALL KEY FIGURES

Moreover, we sponsor school classes and support various teaching formats with our expertise and materials. School students also have the chance to get to know our factories in situ. Here, they are given a full insight into what their future workplaces and fields of activity could look like. This also includes all aspects relevant to work, such as responsibility, corporate co-determination, in-house commitment and training courses to encourage and strengthen personal and social skills. This direct exchange is of great benefit to all those involved.

Awareness for the protection of the environment

In our partnerships with educational institutions issues relevant to the environment are also always on our agenda. Whether in specialist lectures at schools or when introducing students to our many different jobs in the classroom, we always actively address environmental protection issues and invite students to reflect on and discuss these together.

Fund-raising campaign for the people in Ukraine
The Group campaign to collect donations for the people in Ukraine in March and April 2022 raised €101,112. Salzgitter AG doubled the final total and rounded it up to €210,000. The Group had already donated €500,000 to the campaign. Donations went to the Aktionsbündnis Katastrophenhilfe, a disaster relief alliance made up of the charities Caritas International, the German Red Cross, UNICEF and Diakonie Katastrophenhilfe.

Around the globe

Our production sites outside Germany

For decades KHS has maintained production sites throughout the world, with its global alignment shaping the way the company does business. We opened our first production site outside Europe in São Paulo, Brazil, in 1962. Since then we have established a number of further KHS factories in the USA, Mexico, India and China. Our international plants manufacture for the regional market according to international standards of quality and ethics. Our global production network enables us to support regional customer projects and offer customers numerous direct services at a local level.

KHS' long-term presence at its various production locations outside Germany has resulted in close ties being formed with the employees who work for us there and their families. These are the people we are committed to, especially when addressing occupational health and safety issues, improving production processes and further developing personal skills and qualifications. In our responsibility for our international production sites we see ourselves as part of the local society which we contribute to in the form of various campaigns and aid projects.

In this report, a number of example projects in place at our plants outside Germany illustrate the responsibility we assume towards our customers, employees and local companies.

* Operations commenced in Octover 2021, with the plant replacing the Suzhou production site.

Brazil

Setting a good example

KHS has operated its own factory in São Paulo, Brazil, since 1962. At the oldest production site outside Germany within the KHS Group we manufacture machines and components for our process engineering, filling technology and conveyor systems. KHS service teams based at our plant in São Paulo provide our customers in Brazil and the neighboring regions with direct local support. We attach great value to making our production processes as gentle on resources as possible and thus reducing the impact our company has on the environment in the long term.

KHS' high quality requirements apply to the manufacturing process and products constructed on site. Our Brazilian plant is certified according to the international ISO 9001 management system and complies with the KHS Group's quality and process specifications. Moreover, the factory is audited by SMETA/SEDEX and EcoVadis on a regular basis.

Thanks to the various measures in place here in São Paulo, we ultimately also help to have a lasting positive influence on the social environment and well-being of our employees and their families in the neighboring communities.

Focus on waste reduction and energy and water consumption

We want to continue to meet the growing requirements dictated by a sustainable production setup which is why we have made waste reduction and energy and water consumption in particular the focus of our efforts. In doing so, we are also complying with official regulations. The local authorities are the decisive entities here when it comes to preventing potential risks to the environment in commercial and industrial operations. The prime concerns in this respect are wastewater treatment and disposal and the correct recycling of hazardous materials such as paint, coatings and liquids used to clean stainless-steel surfaces. A dedicated team for occupational health, safety and environmental protection organizes monthly meetings and draws up regular detailed reports on specific projects. Annually, we invest approximately 15 to 20% of our entire measures budget in the sustainable further development of our site.

Occupational health and safety key pillars

Besides optimizing the use of energy and other resources in our production processes, the occupational health and safety (OHS) of our personnel is also a key pillar of our site policy. The plant in Brazil has its own OHS team that identifies day-to-day risks at work and trains our workforce accordingly. This allows us to alert our employees to potential accident hazards that they can then largely avoid themselves. The OHS team has introduced additional safety measures in the truck loading process or operation of cranes, for instance. Automated procedures and emergency stop systems actively protect our personnel from potential dangers within the operating radius. Finally, all executive managers receive specially devised safety instruction at regular intervals. This sensitizes them to these important topics; they then pass on this knowledge to their team and anchor it in day-to-day operations.

Projects in the reporting period (selection)

In-house water and wastewater treatment
At KHS Brazil we have a system for capturing rainwater and a well that collects water at a depth of 480 meters. This water is treated in house and the final quality is so good that it can be used throughout the entire factory, including for our employees' own consumption. The entire system has been in operation for several years and helps us to save around 40% of the company's water costs and to cut down on the amount of water drawn by the company from the community.

Furthermore, all wastewater produced (water from the cleaning of parts, oil from the machine process and liquids from the deburring process) is physically and chemically treated at a special treatment station and then drained off. This system operates in full compliance with the regulations and requirements of the local authorities.

Replacement of wood and reusable packaging
All of the wooden pallets used at the factory have been replaced by more durable plastic pallets for the provision and transportation of materials in house. KHS Brazil is also implementing a recycling program in cooperation with local companies. During the reporting period a program for the reuse of wooden pallets provided by suppliers with deliveries of parts was launched. These pallets are now sold on to other companies who can reuse them as part of their life cycle. As regards packaging for new lines and machines, KHS Brazil also takes this back from local customers and uses it for new projects in order to extend its lifetime for as long as possible.

Location: Saõ Paulo, Brazil
Employees: approx. 420
Total area: 62.000 m²
Production: 20.500 m²
Administration and development: 29.100 m²
Certifications and awards:
ISO 9001, SEDEX, EcoVadis

All cardboard boxes from suppliers, and especially from KHS GmbH, are reused and marked with a label specifically stating this fact. This greatly helps to lower the number of new boxes procured, plus waste is reduced and with it energy consumption and carbon emissions.

Greenhouse gas and toxic emissions
The search for systems and solutions that reduce our impact on the environment forms the core of our activities. We therefore use various equipment designed to avoid or cut our carbon emissions and monitor this. This includes apparatus for the surface treatment of metal parts and devices used for in-house transportation and logistics.

Our blasting cabinets and spray booths have a local exhaust system equipped with filters for particles and organic vapors.

All of our forklifts are powered by gas which considerably reduces our air pollutant emissions (especially carbon monoxide).

Since 2020 KHS Brazil has also operated a plant to generate nitrogen gas (N2) that is used in several of the company's processes. In installing this plant we have reduced the environmental and climate impact of the truck traffic previously used to transport the gas to our factory to zero.

KHS Brazil only uses ethanol fuel in its fleet vehicles. This biobased fuel is an important keystone of the site's strategy to reduce greenhouse gas emissions.

In addition, the factory's old air conditioning units are currently being replaced by more modern devices. The new units will save more than 50% energy compared to the older models. Besides saving energy, the new devices consume less greenhouse gas coolant and in doing so also reduce KHS Brazil's carbon footprint.

Electricity consumption
All of the electricity provided on site is made from renewable sources of energy. Moreover, at its plant in Brazil KHS endeavors to cut the energy consumption of its processes and activities wherever possible.

In this context the entire factory has been fitted with LED lights and a roof with plastic skylights that enables natural light to be used during the day, thus reducing the number of artificial lights needed to an absolute minimum.

Social responsibility
Every two years KHS Brazil employs around ten trainees from state technical colleges as part of their apprenticeship. These trainees are usually aged between 15 and 19 and stay at the company for two years, during which they receive a vocational training wage. They are all encouraged to learn as much as they can in a special training program that includes practical modules on subjects such as maintenance through to assembly. At the end of this period they have the chance to be taken on by the company as regular employees. The majority of the workforce in Brazil has gone through this program.

» My personal commitment is to participate as part of a team in a company whose aim is to act responsibly for its stakeholders and future generations. «

Renato Zanotti,
plant manager
in São Paulo, Brazil

China

KHS in Asia: Kunshan

KHS has been represented in China since 2005. During the reporting period a new factory was opened and production moved to Kunshan in the Chinese province of Jiangsu. Operations commenced in October 2021.

At the new factory we concentrate on the manufacture of PET filling and packaging systems. We also offer a wide range of consultancy services for sustainable plastic container systems and solutions. KHS is also present on the local market and able to directly supply all of the relevant sales services to the same.

The new production site attaches great importance to efficient, safe and resource-conserving production processes that comply with the KHS Group's quality and process specifications. In China a number of state requirements and regulations are also accounted for in the site's quality processes. We use a security consulting company to help keep us up to date with the latest state provisions. Our quality processes include regular security checks and compliant implementation of specifications. These tasks are performed on site and are key prerequisites that allow us to supply the markets and regional customers according to KHS' demand for quality.

Sustainability and safety at the factory

In order to incorporate ever-increasing demands into our business processes in good time, we train our management and employees regularly based on state requirements and our KHS guidelines. We have set up a dedicated office run by an expert who is solely responsible for issues of sustainability and safety and is familiar with all aspects of the local rules and regulations. With a view to further improving sustainability and the use of resources, we monitor our plant's energy consumption and have drawn up a waste management program in accordance with Chinese environmental regulations.

We also include our suppliers in this program so that we reduce the amount of packaging waste and make use of returnable transport containers. We currently have four charging stations for electric cars and are gradually increasing this number. A further measure we have adopted to cut our carbon emissions is to provide shuttle buses for our employees.

We have involved and trained our management regarding occupational health and safety based on the established compliance guidelines. It is extremely important to integrate procedures into daily production processes that offer the greatest possible occupational health and safety. One of the flagship projects we have established here is our safety first campaign. This sensitizes our workforce on site to potential hazards, enabling them to better identify possible causes of accident independently and make work processes safer through their own commitment. The campaign is based on the specifications and guidelines of the KHS Group. Our local management meets once a month to discuss these issues and initiate further improvements at the factory. Here, we are also in regular contact with company headquarters in Germany in order to draw their attention to local conditions for consideration in the sustainable strategic measures they devise.

This exchange is also promoted and assisted by annual meetings at a global level. In this way, all of the production sites are familiar with the respective current projects and local targets, with this dialog enabling them to identify common issues.

Projects in the reporting period

Safety first

The safety program instigated at the old factory is being continued at the new production site. It has undergone constant further development since 2017 and instructs existing and new employees in all aspects relevant to safety at work. Schooling is provided by fixed teams who hold appropriate training courses for greater occupational health and safety. The program focuses on safety in production, correct behavior in the event of a fire and correct documentation with the help of regular inspections of critical work areas (pressure vessels, pressure relief valves, etc.) for continuous improvement of the work processes and procedures at the plant.

Location: Kunshan, China
Employees: approx. 45
Total area: 4.700 m²
Production: 3.800 m²
Administration and developmen: 900 m²
Certifications and awards:
EcoVadis

» I'm personally committed to ensuring that all safety procedures and environmental regulations are complied with at our production site. Sustainability is one of my hallmarks of production here at the Chinese factory in Kunshan. «

Detlef Prellberg,
plant manager at KHS
in Kunshan

India

KHS in Asia: Ahmedabad

A clear view of the future

In 1997 KHS set up an Indian joint venture with a local mechanical engineering company. Since then, in Ahmedabad we have been manufacturing single machines and turnkey systems specifically for the regional markets. We coordinate numerous service activities for Central Asia and implement entire projects for new filling and packaging lines.

Our consistent adherence to quality steps throughout the entire production process and the responsible handling of occupational health and safety measures and regulations for our workforce form the basis of our success. Our management systems have been certified externally since 2015 according to ISO 9001 for quality management, ISO 14001 for environmental management and ISO 50001 for energy management. Here, we specifically focus on energy and resource efficiency and carry out targeted measures to optimize this. Natural lighting is used, for example. The extensive planting on our factory premises and daily controls of the air quality in our production shops serve to promote the well-being of our employees. These measures have made considerable improvements compared to base year 2019.

Regarding occupational health and safety, KHS India was successfully certified in 2018 and conforms with the ISO 45001 standard. We also perform further relevant audits such as SEDEX or EcoVadis as a matter of course.

Exploiting group strengths

Our own actions follow the mission statement of the entire corporate group. We aim to generate long-term, profitable growth that creates added value and can be sustained in the future. The key here is to constantly further develop our technical systems and services. Our dedication to sustainable issues constitutes a genuine competitive advantage and is being noted by both customers and the government who are paying increasing attention to how industry and business commit to sustainability. We regularly report on our company's social activities to the Indian government. Growing demands in conjunction with a circular economy call for the hiring of suitably qualified personnel. These are special challenges to and decisive factors in the future alignment of our production site.

In the long term KHS aims to adopt a zero waste strategy, coupled with a continuous cut in its carbon emissions. While we also pursue this strategy in production, our focus here lies on our product systems and solutions. This enables us to comply with the plastic ban initiated by the Indian government that provides for state regulation of single-use PET containers. The challenge for us is to offer alternative forms of packaging and shift our focus towards reuse and recycling. Thanks to further corporate developments in rPET and lightweighting and continuing savings in resource and energy, we are able to also provide suitable local solutions to the challenges presented by sustainability.

High commitment to sustainability

Setting and consistently achieving its annual goals earned KHS the Kaizen Award in the sustainability category from the Confederation of Indian Industry (CII) in 2022 for its paper reduction project. This was implemented in the year in question and had a positive impact on our carbon emissions and company savings in paper, printing, files and space. Indirect savings in the water, trees and electricity consumed by the manufacture of paper were also factored in. This achievement also strengthens sustainable action within our own community, especially in the immediate vicinity of the factory.

This is further supported by a dedicated local CSR team. We care for children in need through a number of education and health projects, sponsor extensive greening campaigns and conduct assessments for prospective IT students. In November 2022 KHS India's support for deaf-and-blind children and adults was heralded as one of the three best CSR initiatives by the CSR Journal.

New projects in the reporting period benefit the environment and local communities

New water treatment plant
We can now treat and recycle wastewater from our production processes so effectively that we can use it to irrigate our plants, for instance. This saves us around 20,000 liters of fresh water per day.

Greening of the factory premises
The generally poor air quality continues to be a major health concern in India. We have thus planted up 70% of our factory premises in order to create a green space and clean up the air at our location. When we erected our production shop back in 2006, we also made sure to save the trees already growing on our premises. The air quality at our site is now noticeably better than that in the nearby city of Ahmedabad.

Vehicle sharing for commuters
We have optimized the commuter route for our company buses and reduced this number by two, thus cutting carbon emissions.

Location:
Ahmedabad, state of Gujarat, India
Employees: approx. 260
Total area: 90.850 m²
Production: 17.805 m²
Administration and development: 16.950 m²
Certifications and awards:
ISO 9001, ISO 14001, ISO 50001, ISO 45001, SEDEX, EcoVadis

»KHS India is constantly striving to be more sustainable. We aim to create the most environmentally-friendly workplace with optimized carbon emissions. For the future we plan on using solar energy instead of electricity generated by coal power stations. «

Yatindra Sharma,
managing director and plant manager at KHS in Ahmedabad

Zinacantepec, Mexico

Act locally, compete globally

KHS has been represented by offices in Mexico since the 1970s. In 1992 KHS Mexicana was founded and production of our conveyor systems started at a factory in Zinacantepec in the state of Mexico. The production site has been continuously further developed: in 2005 the production shop was extended and in 2008 a new warehouse was built for the Maintenance Department.

At the plant we now manage all local and regional services for our national and international customers in Mexico and turnkey projects for new filling and packaging systems.

Through ISO 9001 certification we have established a recognized quality management system standard in Mexico and also regularly and successfully take part in SEDEX and EcoVadis audits.

Expansion of local standards

Our products manufactured locally and those imported from our factories outside Mexico that are driven by a motor comply with the Norma Oficial Mexicana (NOM). Besides operating an international quality management system according to ISO 9001, we also satisfy the requirements, regulations and standards of this certification. During the reporting period KHS has implemented two new national standards in this respect: NOM 35 on psychosocial risks and NOM 36 on ergonomic risks, both of which constitute new rules and are mandatory.

High level of commitment to corporate environmental protection

Here in Mexico we are further developing our environmental and energy management system in accordance with Group measures and regulations. Besides complying with state regulations, we also take part in the voluntary Mexico Clean Industry program with the continuous support of KHS headquarters in Germany. This is an initiative that aims to encourage industrial companies to show greater commitment to the environment by offering them economic incentives. We implement numerous measures from this program and in doing so address social and ecological challenges above and beyond the legal standards.

KHS personnel on site continue to be sensitized to environmental issues and are encouraged to act responsibly and sustainably.

As a result of this regional program, we focus on operational environmental management, avoiding hazardous scrap contaminated with pollutants and classifying waste and chemical products according to their environmental impact.

We regularly report on our measures to the local authorities and give our customers and suppliers an insight into our projects and progress.

Mexico Clean Industry
The Mexico Clean Industry certification program aims to protect the country's ecological balance by primarily focusing on industries that could have a potentially harmful impact on Mexico's environment.

Social responsibility and commitment

To mark special public holidays or the start of school, KHS Mexico organizes events for personnel family members and children, such as flowers on Mother's Day/International Women's Day, school pencil cases or even a factory soccer tournament, for instance (in which more than 70–80 of our 250 employees took part).

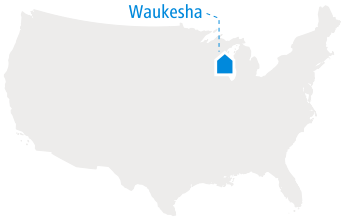
Reforestation

Since 2017 around 800 trees have been planted as part of the reforestation project.

Location:
Zinacantepec, state of Mexico, Mexico
Employees: approx. 250
Total area: 75.000 m²
Production: 6.820 m²
Administration and development: 2.600 m²
Products: conveyor systems
Certifications and awards:
ISO 9001, SEDEX, Mexico Clean Industry Certification Program, CRESE, EcoVadis

» We're a reliable partner, not just to our customers and business partners but also to society and the community we live and work in every single day. «

Stefan Gulden,
managing director of
KHS México in Zinacantepec



USA

Locally rooted and committed

KHS has been represented in the USA since 1971. In Waukesha in the state of Wisconsin we manufacture products and components for process engineering and filling technology.

In accordance with KHS standards applicable worldwide, we are continuously reviewing our production processes to see where there is room for further optimization regarding the conservation of resources, protection of the environment and occupational health and safety. All identified areas of potential are systematically prioritized and developed. Our current focus is to implement the KHS Waukesha continuous improvement process (CIP) together with our personnel and make various improvements.

CIP is tracked under our quality management program that meets international standards. Our factory is certified every three years according to the ISO 9001 management system. We also undergo regular audits in accordance with SEDEX and EcoVadis. Furthermore, we are certified by the American Society of Mechanical Engineers (ASME), the National Board of Boiler and Pressure Vessel Inspectors (NBBI) and the Technical Standards and Safety Authority (TSSA).

Responsibility for personnel and operations

Our personnel regularly reflect the great significance KHS' social commitment has for them. Good working conditions, where people are treated with fairness and shown appreciation, effective, relevant tasks and duties and a safe and healthy working environment are paramount for our current and prospective employees. Our Human Resources Department is thus not only charged with hiring qualified personnel but also with developing their skills further and ensuring their loyalty to the company in the long term. This includes offering employees an attractive place of work and taking the changing aspects of the working world into account in conjunction with a person's work/life balance and family commitments. So that simple tasks are also fairly remunerated, we have introduced a minimum wage system at the site.

Our plant management is responsible for the direction our production site takes and enables compliance guidelines to be adhered to. We train people who hold positions of responsibility at all levels of management to this end on a regular basis. They have the task of passing on what they have learned to their colleagues. We use these courses to promote our corporate goals and regularly communicate these throughout the site.

Efficiency and environmental protection at the site

Our management aims to continuously optimize our production processes and building technology with a view to saving on energy and resources (see below for a list of measures that were introduced during the reporting period). Our plant monitors its energy consumption to see where this can be further improved. The most recent optimizations include us taking delivery of procurements for production directly at the point of requirement in order to reduce transportation in house and thus save fuel for our forklift trucks. The air flow in our production shop has also been rerouted so that it no longer disturbs our welding operations, enabling savings in welding gas to be made. Switching over to energy-efficient LED lighting and making the maximum use of daylight also cuts our energy bills. Less major modifications also add up and help to make our plant more energy- and cost-efficient; installing motion detectors means that the lights only go on in the toilets when they are in use, for instance, again allowing us to save electricity.

Our clearly defined single-stream recycling processes boost resource efficiency and make a key contribution to the circular economy. Valuable resources such as paper, cardboard and wood, batteries, printer cartridges, aluminum, carbon and stainless steel and electrical and chemical components are collected separately and

correctly recycled. As a large number of wooden pallets, crates and boards regularly accumulate chiefly as a result of the transportation of materials to our plant, we have also developed a recycling system for these resources.

Firmly rooted and locally committed

We have been part of the immediate Waukesha community for decades and have direct ties to the local population. We are like a good neighbor and therefore feel it is our duty to help find solutions to urgent and critical local issues. We traditionally support numerous local projects on a charitable or voluntary basis and provide assistance to employees in financial need.

Location: Waukesha, USA
Employees: approx. 315
Total area: 54.252 m²
Production: 14.320 m²
Administration and development: 8.239 m²
Production outpur: 60 Maschinen / Jahr
Certifications and awards:
ISO 9001, ASME, NBBI, TSSA, SEDEX, EcoVadis

Projects in the reporting period

Building expansion

In 2022 we added 1,694 m² of new production space to our existing production shop, plus 429 m² of office space. We have also set up a training center. During the planning and construction process the following points were optimized to cut energy consumption and protect the environment:

Energy efficiency measures

- Sensors and timer switches for inside and outside lighting
- Conversion of 110 existing high-bay lights to LEDs (24,000-lumen LED lights)
- Insulation and installation of large windows for natural lighting
- R30 insulation for walls and roofs, truck lifting gates and doors

Water and resource savings

- Water treatment for all machine test water using reverse osmosis
- Installation of water-saving toilets
- Faucets, soap dispensers and hand dryers fitted with motion sensors

Biodiversity

- Natural landscaping, including the planting of twelve conifers and deciduous trees

» As a company we have a great responsibility to society and the environment. Our aim is to create a better world for the generations to come. «

John Turner,
plant manager of KHS
in Waukesha

Our key figures in black and white

From turnover figures to figures on power consumption: the facts and figures speak for themselves.

Profile

KPI	Unit	Reference framework	2022	2021	2020
Sales	€m	KHS Group	1,291	1,245	1,131
EBIT	€m	Salzgitter Technology Business Unit	47	56.7	4.2
EBT[1]	€m	Salzgitter Technology Business Unit	48	59	0.9
EBITDA	€m	Salzgitter Technology Business Unit	76.8	84.2	32.2
Business locations	Number	KHS Group	40	40	40
Production sites	Number	KHS Group	10	10	11
Issued patents and utility models	Number	KHS Group	7,293	7,107	6,814
Expenditure for R&D	€m	Salzgitter Technology Business Unit	21.8	20.5	30.2
Charitable financial donations	T€	Germany	25	86	73

[1] The reference framework and values for 2018–2020 from the KHS sustainability report for 2019/2020 have been corrected.

Employees

KPI	Unit	Reference framework	2022	2021	2020
Management structure by role Level 1 = Executive Management Board; Level 2 = divisional head/EM; Level 3 = (senior) departmental head	Number	Germany	4 EMB 15 EM 153 (S)DH	4 EMB 14 EM 201 (S)DH	n.s.
Number of employees (total workforce)	Number	KHS Group	5,002	4,979	5,085
Number of employees (total workforce in Germany)	Number	KHS Group	3,021	3,046	3,111
Fixed-term employment relationships	Proportion in %	Germany	9	8	8

KPI	Unit	Reference framework	2022	2021	2020
Employee loyalty					
Average years of service for the company	Years	Germany	17	18	18
Fluctuation	Rate	Germany	2	2	2
Personnel development					
Average age of the core workforce	Years	Germany	45	46	46
Employees under 30 years old	Number	KHS Group	769	784	511
30 to 50 years old	Number	KHS Group	2,538	2,545	2,561
Older than 50	Number	KHS Group	1,695	1,650	1,668

Employees

KPI	Unit	Reference framework	2022	2021	2020
Diversity and equality					
Number of women in the total workforce	Proportion in %	Germany	14	14	14
Women at management level[1]	Proportion in %	Germany	10	10	10
Employees with disabilities	Proportion in %	Germany	5	5	5
Nationalities	Number	KHS Group	79	77	79
Men's basic salary compared to women's	Ratio of 1:x	Germany	1:0.95	1:0.95	n.s.

[1] Management level includes the Executive Management Board, divisional heads, senior departmental heads and departmental heads.

KPI	Unit	Reference framework	2022	2021	2020
Training					
Apprentices and trainees	Number	Germany	254	249	253
Average age of apprentices and trainees	Years	Germany	22	22	23
Further training					
Trained employees	Number	Germany	2,698	2,737	2,634
Expenditure for further training (e.g. KHS campus, individual courses, etc.)	T€	Germany	1,090	1,240	766
In-house further training courses	Number	Germany	723	673	436
Personnel development measures	Number	Germany	6,737	7,506	6,216

Compliance & Supply Chain

KPI	Unit	Reference framework	2022	2021	2020
Supply Chain Management					
Procurements by region of origin and purchasing volume[1]					
Germany	Proportion in %	German plants	62.83	54.81	n.s.
Europe	Proportion in %	German plants	16.21	15.51	n.s.
USA	Proportion in %	German plants	7.94	14.48	n.s.
Brazil	Proportion in %	German plants	4.87	5.85	n.s.
China	Proportion in %	German plants	4.61	3.96	n.s.
America	Proportion in %	German plants	2.09	3.35	n.s.
Asia/Australia	Proportion in %	German plants	1.38	2.02	n.s.
Africa	Proportion in %	German plants	0.06	0.03	n.s.
Number of supplier checks	Whole number	KHS GmbH	40	28	n.s.

[1] Without intercompany orders and CPD suppliers. Regions are categorized according to the UN definition by continent; additional listing of the four largest countries of procurement.

Occupational health and safety

KPI	Unit	Reference framework	2022	2021	2020
Production sites with a certified OHS management system (according to ISO 45001 or OHSAS 18001 in previous years)[1]	Proportion in %	KHS Group	60	60	55
Accident frequency[2]	Anzahl	German plants	6.3	6.9	10.3
Sickness rate[3]	Anteil in %	German plants	6.68	5.43	5.33

KPI	Unit	Reference framework	2022	2021	2020
Distinction between all accidents by type and severity					
of which resulting in death	Number	German plants	0	0	0
of which reportable accidents >= 1–3 calendar days of absence from work[4]	Number	German plants	10	7	9
of which reportable accidents > 3 calendar days of absence from work[5]	Number	German plants	26	30	40
Industrial accidents with 0 days of absence[6]	Number	German plants	136	145	245

[1] Proportion of all production sites.
[2] Reportable accidents at work per one million working hours.
[3] Paid and unpaid hours of sickness in % of target hours; Jan–Dec; core workforce plus apprentices.
[4] Industrial and commuting accidents.
[5] Industrial and commuting accidents.
[6] According to accident log entries.

Corporate environmental protection

KPI	Unit	Reference framework	2022	2021	2020
Production sites with a certified environmental management system (according to ISO 14001)	Proportion in %	KHS Group	60	60	55
Production sites with a certified energy management system (according to ISO 50001)	Proportion in %	KHS Group	60	60	55
Energy and climate protection in production					
Absolute energy consumption[1, 2]	MWh	German plants	34,476	43,962	41,030
Distinction by type of energy[2]					
of which heating oil	Proportion in %	German plants	5.1	7.0	5.6
of which natural gas	Proportion in %	German plants	45.7	51.4	49.2
of which electricity	Proportion in %	German plants	34.3	29.4	31.3
of which fuel (gasoline/diesel)	Proportion in %	German plants	14.9	12.2	13.9
of which from renewable sources (certified green electricity)	Proportion in %	German plants	34.3	29.4	31.3
Specific electricity consumption	MWh/€m turnover	German plants	16.1	20.4	21.4
Specific electricity consumption	kWh/hour worked	German plants	2.9	3.1	3.3
Specific electricity consumption	kWh/m²	German plants	65.6	71.7	71.2

Corporate environmental protection

KPI	Unit	Reference framework	2022	2021	2020
Temperature-adjusted heating consumption	MWh/€m turnover	German plants	26.1	38.7	41.2
Temperature-adjusted heating consumption	kWh/hour worked	German plants	4.8	5.8	6.4
Temperature-adjusted heating consumption	kWh/m²	German plants	106.4	135.7	137.1
Inventory of greenhouse gas emissions (GHG emissions)					
Scope 1: direct GHG emissions	t CO_2 equivalents	KHS Group	Not yet identified	9,494	n.s.
Scope 2: indirect, energy-related GHG emissions					
– Location-based	t CO_2 equivalents	KHS Group	Not yet identified	7,817	n.s.
– Market-based	t CO_2 equivalents	KHS Group	Not yet identified	12,225	n.s.
Resource conservation					
Absolute water consumption[2]	m³	German plants	28,631	30,589	37,344
Specific water consumption[2]	m³/€m turnover	German plants	39	48.4	62.3
Specific water consumption[2]	l/hour worked	German plants	7.1	7.3	9.6
Specific water consumption[2]	l/m²	German plants	158.9	169.8	207.3

Corporate environmental protection

KPI	Unit	Reference framework	2022	2021	2020
Total amount of waste[3]	t	German plants	2,689	3,457	2,242
Amount of hazardous waste[3]	Proportion in %	German plants	6.1	2.8	1.0
Specific amount of waste[2]	t/€m turnover	German plants	3.7	5.5	4.7
Specific amount of waste[2]	kg/hour worked	German plants	0.7	0.8	0.7
Specific amount of waste[2]	kg/m²	German plants	14.9	19.2	15.5

Business travel

KPI	Unit	Reference framework	2022	2021	2020
Fleet vehicles	Number	Germany	55	67	75
Plug-in hybrids/electric vehicles	Proportion in %	Germany	1.82	0	2.67
Specific fuel consumption	l/100 km	Germany	5	5	5,1
Flights[4]	t/CO_{2e}	Germany	2,627	2,031	1,748
With own vehicle[5]	km	Germany	169,596	171,222	113,375

[1] Including gas consumption for non-heating purposes and excluding tenant electricity and gas consumption.
[2] The value for 2020 from the KHS sustainability report for 2019/2020 has been corrected.
[3] The identification of amounts of waste was adjusted from 2021; values may thus be higher.
[4] DEFRA is the British government's Department for Environment, Food & Rural Affairs. The factors and calculations for conversion are specific to the United Kingdom.
[5] Border traffic not accounted for here.

Corporate environmental protection

KPI	Unit	Reference framework	2022	2021	2020
Logistics					
Traffic for inbound and outbound logistics[1]	km	German plants	507,590,939	383,983,418	336,355,512
of which by plane	km	German plants	315,003,689	244,017,584	208,963,527
of which by freight train	km	German plants	–	–	–
of which by truck	km	German plants	175,023,965	125,224,729	117,539,632
of which by cargo ship	km	German plants	17,563,285	14,741,105	9,852,353

[1] Data includes all forms of transport according to 3.4 and 3.9 in outbound and inbound mode.

About the KHS sustainability report

The following voluntary sustainability report focuses on the key impact the KHS Group's business activities have on the environment, economy and society and provides information for the 2021/2022 reporting period.

The report is divided into four main chapters: 1) strategy and governance, 2) product responsibility, 3) operational ecology and 4) social activities. These chapters describe the key challenges, targets, measures and approaches to management that are based on KHS' sustainability strategy.

Aim of the sustainability report

Quantifiable, transparent and thus verifiable sustainability performance is the foundation of progress and further development. In our sustainability report, we outline our sustainability targets and their current state of implementation and highlight the outstanding commitment shown and measures in place at our various production sites.

One of the main purposes of this document is to report on the economic, social and ecological impact of KHS' business operations, using key figures to substantiate this. Our data base was again extended in the drawing up of the current report. Our key environmental figures now include all of our production sites outside Germany for the first time. Specially developed KPIs enable the level of goal achievement with respect to our sustainability performance to be quantified.

Within Salzgitter AG, in its function as the Technology Business Unit KHS also contributes data to the annual consolidated Group management report. Being integrated into the Group reporting process provides new impetus for discussions with our employees, customers and business partners, further stakeholders and the interested public.

Our voluntary report is based on the standards of the Global Reporting Initiative (GRI) and further requirements for good sustainability reporting. In close cooperation with Salzgitter AG KHS has based its report on the new reporting rules defined in particular by the new EU Corporate Sustainability Reporting Directive (CSRD) and the EU's taxonomy directives.

KHS aims to further develop its sustainability report in keeping with these legal requirements and to thus make it easier to compare the report's content with that of any other market participant.

Defining the report content

When defining the topics to be included in the report, we focused on the central expectations of our stakeholders and the principle of materiality.

The materiality analysis (see Salzgitter AG Annual Report 2022, p. 91) conducted by our Group parent Salzgitter AG in 2022 specified the data and framework for the thematic priorities to be set in our sustainability report for 2021/2022. KHS contributed to the implementation of the Group materiality analysis and took the presented results of the Group analysis as a basis for discussion in order to reflect on the special aspects of KHS' field of business with select stakeholders (customers and service providers). As a result of these talks, the relevant sustainability issues were assessed with a view to their significance for KHS and assigned to the areas of activity where KHS has initiated or (further) developed appropriate management approaches. The conclusions from this process are a composite part of the current sustainability report.

Our sustainability report is constantly maintained and further expanded. After four voluntary documents of this nature, the report was again analyzed with external support. This allowed us to gage our current status and showed us where we needed to go into greater detail in our presentation of certain subject matter in the report. We have now been able to include the identified potential improvements in this report. Here, par-

ticular attention was paid to the depiction of our main fields of activity and key figures.

In our future reports we aim to reinforce these strategic positions by involving our stakeholders and to subsequently translate these into our operative sustainability program. This will be initiated at the start of 2023 with the instigation of a new sustainability management organization.

Reporting period and frequency

The current KHS sustainability report refers to business years 2021/2022 (January 1, 2021, to December 31, 2022) and is the fifth consecutive voluntary report to have been issued. The editorial deadline was 31.03.2023. This issue is the last time that KHS will report over a two-year period. As of 2023 we will align the publication of the KHS sustainability report with the yearly issue of Salzgitter AG's non-financial report. In doing so, KHS reinforces its own efforts to gradually bring its sustainability reporting into line with the requirements for companies obliged to submit a report according to the new CSRD.

Reporting framework

The statements and information given in this report always refer to the entire company, including all subsidiaries of the KHS Group subject to operative control (see the About KHS company profile). The reported measures focus on our production sites in Germany. Projects at KHS' subsidiaries outside Germany are again described in dedicated profiles and are to be further integrated into the report in the future. Participations and companies outside the KHS Group consolidation are not the subject matter of this report.

Restrictions in the scope of this report are noted in the appropriate places and result from the current state of data availability. All of our business unit locations are to be successively included in the report and are working to produce the necessary data basis.

Contact

The person responsible for project management and the strategic content derivation process is

Nicole Pohl,
senior CSR manager at KHS.
Telefon: +49 231 569-1497
E-Mail

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Executive Management Board:
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Staff:
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Salzgitter AG:
Simon Kroop, Thorsten Möllmann

Editors:
Brigitte Läpper-Röhricht,
Dr. Thomas Schmelzer

Great Thinks GmbH
Lindenallee 54
50968 Cologne / Germany
Sustainability communication and ESG consulting
www.great-thinks.de

Specialist advice on alignment with reporting standards:
adelphi consult
Svenja Stropahl

adelphi consult GmbH
Alt-Moabit 91
10559 Berlin / Germany
www.adelphi.de

Design and technical implementation:
Sarah Metsch, Judith Eckert

NetFederation GmbH
Sürther Hauptstraße 180 B
50999 Cologne / Germany
www.netfed.de

Translation:
David Blears
KHS Gruppe

Ruth Chitty
Übersetzungsbüro Rapid Communication
Kiefernweg 18
55442 Stromberg / Germany
www.rapid-communication.de

Photos/graphics:

GRI Content Index

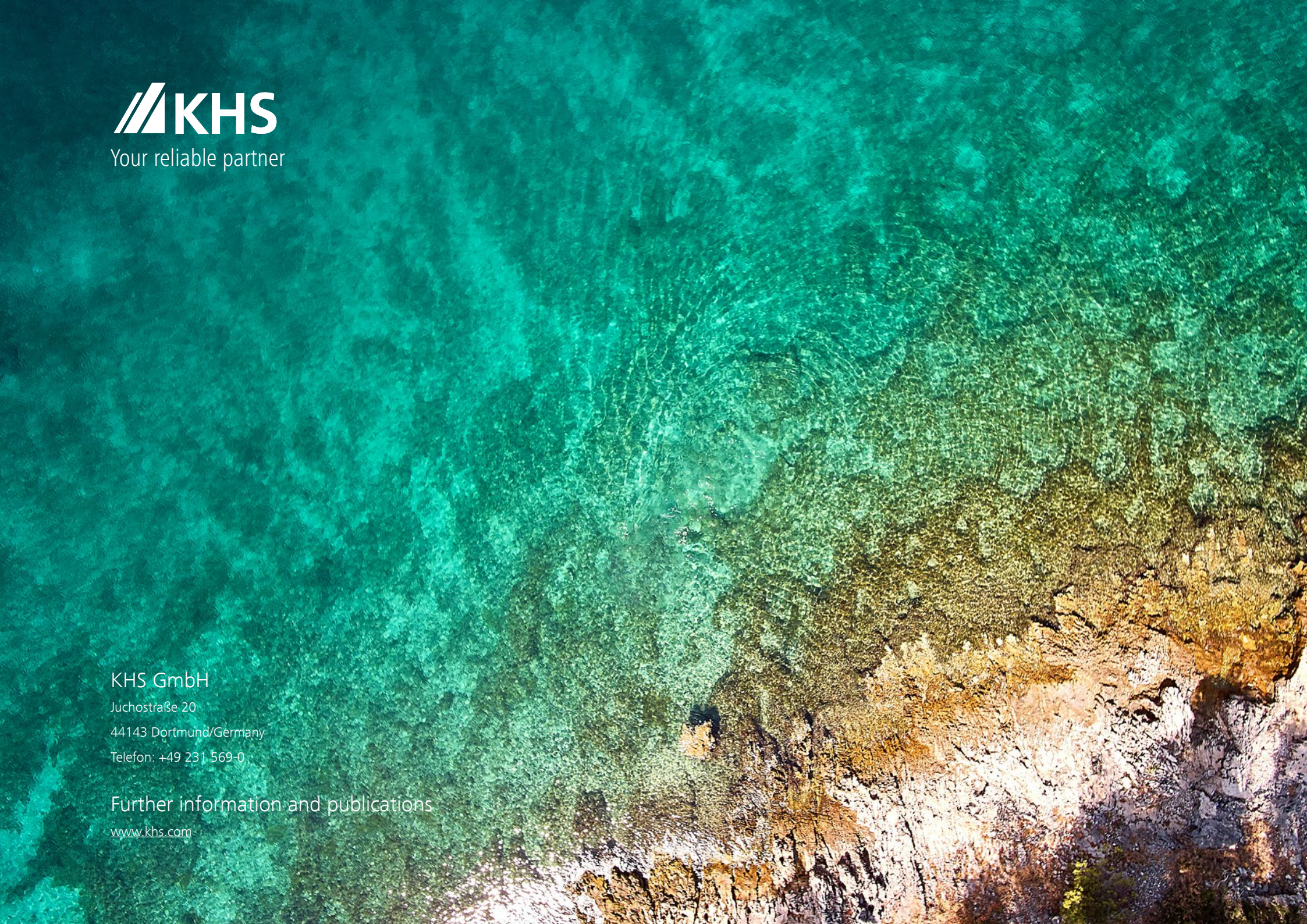
Statement of use: KHS has reported the information cited in this GRI content index for the period from 1 January 2022 to 31 December 2022 with reference to the GRI Standards. GRI 1: Foundation 2021

Content	Further information	Page reference	With reference to the GRI Standards
Company		p. 5 – 6; 58; 71; 74	**GRI 2: General Disclosures 2021** • 2-1 Organizational details • 2-6 Activities, value chain and other business relationships
Reporting profile	• The report by KHS has not been externally assured. KHS has set up internal procedures to ensure the quality of the reported information and integrates verified content that has been published in the Group reporting of Salzgitter AG. • General management approaches and responsibilities are presented in the report for the whole KHS Group. Additional information on measures taken by the international production sites can be found in the profile section beginning p. 58.	p. 80 – 81	**GRI 2: General Disclosures 2021** • 2-2 Entities included in the organization's sustainability reporting • 2-3 Reporting period, frequency and contact point • 2-4 Restatements of information • 2-5 External assurance
Workforce	• Information on the HR management of KHS and social responsibility for its employees is disclosed in the chapter "Social".	p. 5; 72 – 73	**GRI 2: General Disclosures 2021** • 2-7 Employees
Governance		p. 11	**GRI 2: General Disclosures 2021** • 2-12 Role of the highest governance body in overseeing the management of impacts • 2-13 Delegation of responsibility for managing impacts

Content	Further information	Page reference	With reference to the GRI Standards
Statement on sustainable development strategy		p. 4	**GRI 2: General Disclosures 2021** • 2-22 Statement on sustainable development strategy
Policy commitments and their embedding		p. 12 – 13	**GRI 2: General Disclosures 2021** • 2-23 Policy commitments • 2-24 Embedding policy commitments
Compliance with laws and regulations		p. 12 – 13	**GRI 2: General Disclosures 2021** • 2-26 Mechanisms for seeking advice and raising concerns • 2-27 Compliance with laws and regulations
Membership associations	• 1998 | Deutscher Braumeister- und Malzmeisterbund e. V. • 2006 | niro – Netzwerk Industrie RuhrOst e.V. • 2022 | VDMA – Verband Deutscher Maschinen- und Anlagenbau	/	**GRI 2: General Disclosures 2021** • 2-28 Membership associations
Stakeholder engagement		p. 8; 11 p. 49	**GRI 2: General Disclosures 2021** • 2-29 Approach to stakeholder engagement • 2-30 Collective bargaining agreements
Materiality analysis and results	Further information: Salzgitter AG Annual Report 2022, p. 91	p. 80 p. 9 – 10	**GRI 3: Material Topics 2021** • 3-1 Process to determine material topics • 3-2 List of material topics
Customer Health and Safety	The topic is addressed regarding safe operation of KHS machinery as well as regarding consumer health and safety.	p. 21 – 23 p. 24 – 25	**GRI 416: Customer Health and Safety 201**6 **Disclosure 3-3** Management of material topics **Disclosure 416-1** Assessment of the health and safety impacts of product and service categories

Content	Further information	Page reference	With reference to the GRI Standards
Procurement Practices		p. 14 – 15 p. 74	**GRI 204: Procurement Practices 2016** **Disclosure 3-3** Management of material topics
Materials	On materials, KHS reports on the approaches taken in the product design of machines and systems, in the design of beverage packaging as well as within production.	p. 20; 26 – 30 p. 33 – 35 p. 37 – 42; 58 ff.	**GRI 301: Materials 2016** **Disclosure 3-3** Management of material topics **Disclosure 301-1** Materials used by weight or volume **Disclosure 301-2** Recycled input materials used
Energy	On energy, KHS reports on the approaches taken in the product design of machines and systems, in the design of beverage packaging as well as within production, at own sites and in transport and logistics	p. 26 – 28 p. 37 – 44; 58 ff. p. 76 – 77	**GRI 302: Energy 2016** **Disclosure 3-3** Management of material topics **Disclosure 302-1** Energy consumption within the organization **Disclosure 302-2 E**nergy consumption outside of the organizatio**n** **Disclosure 302-3** Energy intensity
Emissions	On GHG emissions, KHS reports on the approaches taken in the product design of machines and systems, in the design of beverage packaging as well as within production, at own sites and in transport and logistics.	p. 26 – 28; 33 – 35 p. 37 – 44; 58 ff. p. 8; 77	**GRI 305: Emissions 2016** **Disclosure 3-3** Management of material topics **Disclosure 305-1** Direct (Scope 1) GHG emissions **Disclosure 305-**2 Energy indirect (Scope 2) GHG emissions
Waste	On waste, KHS reports on the approaches taken within production. The approaches to waste avoidance and circular economy are presented in relation the GRI standard materials.	p. 37 – 42; 58 ff. p. 78	**GRI 306: Waste 2020** **Disclosure 306-3** Waste generated
Water	On water, KHS reports on the approaches taken in the product design of machines and systems as well as within production.	p. 26 – 28 p. 37 – 42; 58 ff. p. 77	**GRI 303: Water and Effluents 2018** **Disclosure 3-3** Management of material topics **Disclosure 303-3** Water withdrawal

Content	Further information	Page reference	With reference to the GRI Standards
Employees and working conditions		p. 46 – 49; 58 ff. p. 72	**GRI 401: Employment 2016** **Disclosure 3-3** Management of material topics **Disclosure 401-1** New employee hires and employee turnover **Disclosure 401-2** Benefits provided to full-time employees that are not provided to temporary or part-time employees
Employee training and education		p. 50 – 52; 58 ff. p. 73	**GRI 404: Training and Education 2016** **Disclosure 3-3** Management of material topics **Disclosure 404-2** Programs for upgrading employee skills and transition assistance programs
Diversity, inclusion and equal opportunities		p. 52; 58 ff. p. 73	**GRI 405: Diversity and Equal Opportunity 2016** **Disclosure 3-3** Management of material topics **Disclosure 405-1** Diversity of governance bodies and employees
Occupational health and safety		p. 53 – 55; 58 ff. p. 75	**GRI 403: Occupational Health and Safety 2018** **Disclosure 3-3** Management of material topics **Disclosure 403-1** Occupational health and safety management system
Diversity, inclusion and equal opportunities		p. 53 – 55; 58 ff. p. 75	**GRI 403: Occupational Health and Safety 2018** **Disclosure 3-3** Management of material topics **Disclosure 403-1** Occupational health and safety management system



KHS GmbH
Juchostraße 20
44143 Dortmund/Germany
Telefon: +49 231 569-0

Further information and publications
www.khs.com